



STIC Search Report

EIC 3700

STIC Database Tracking Number: 116522

TO: Urszula Cegielnik
Location: cp2 10c02
Art Unit: 3712

Case Serial Number: 10/643780

From: Jeanne Horrigan
Location: EIC 3700
CP2-2C08
Phone: 305-5934

jeanne.horrigan@uspto.gov

Search Notes

Attached are the search results for the rigid balloon, including prior art searches in foreign and international patent databases; product and general sci/tech non-patent literature databases; and the Web via the Scirus and Google search engines.

I marked items that seemed to me to either have all the aspects you wanted (balloon, frame, sleeve and strips) or that looked like they were abstracts of articles that would have detailed descriptions of such components. However, I suggest that you review all the results as I might very well have missed tagging some good hits.

ALSO, the material I found on the Internet (at the end of the "non-patent literature" section) does not have good dates on it, but is historical information, so I should be able to find books with good dates that have this information, if you want.

Also attached is a search feedback form. Completion of the form is voluntary. Your completing this form would help us improve our search services.

I hope the attached information is useful. Please feel free to contact me (phone 305-5934 or email jeanne.horrigan@uspto.gov) if you have any questions or need additional searching on this application.

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Urszula Legielnik Examiner #: 77064 Date: 3/10/04
 Art Unit: 3712 Phone Number 30 65806 Serial Number: 10/643786
 Mail Box and Bldg/Room Location: CP2 1002 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Rigid Balloon
 Inventors (please provide full names): Lloyd Randall Anderson TN

Earliest Priority Filing Date: 2/14/2003 Class 446

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

balloon
 A helium balloon with a rod or frame to keep the shape of the balloon preferably with a sleeve and flexible strips to hold the rod or frame.

MAR 10 2004

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>Jeanne Harrison</u>	NA Sequence (#) _____	STN _____
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: _____	Bibliographic _____	Dr.Link _____
Date Completed: _____	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: _____	Patent Family _____	WWW/Internet _____
Online Time: _____	Other _____	Other (specify) _____

ASRC Searcher: Jeanne Horrigan
Serial 10/643780
March 12, 2004

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File 635:Business Dateline(R) 1985-2004/Mar 11
File 740:(Memphis)Comm.Appeal 1990-2004/Mar 10
File 387:The Denver Post 1994-2004/Mar 11
File 471:New York Times Fulltext 90-Day 2004/Mar 11
File 492:Arizona Repub/Phoenix Gaz 19862002/Jan 06
File 494:St LouisPost-Dispatch 1988-2004/Mar 10
File 498:Detroit Free Press 1987-2004/Mar 10
File 631:Boston Globe 1980-2004/Mar 11
File 633:Phil.Inquirer 1983-2004/Mar 09
File 638:Newsday/New York Newsday 1987-2004/Mar 11
File 640:San Francisco Chronicle 1988-2004/Mar 12
File 641:Rocky Mountain News Jun 1989-2004/Mar 10
File 702:Miami Herald 1983-2004/Mar 11
File 703:USA Today 1989-2004/Mar 11
File 704:(Portland)The Oregonian 1989-2004/Mar 10
File 713:Atlanta J/Const. 1989-2004/Mar 12
File 714:(Baltimore) The Sun 1990-2004/Mar 11
File 715:Christian Sci.Mon. 1989-2004/Mar 12
File 725:(Cleveland)Plain Dealer Aug 1991-2004/Mar 10
File 735:St. Petersburg Times 1989- 2004/Mar 10

Set	Items	Description
S1	215	LLOYD(2W)ANDERSON
S2	83659	BALLOON? ? OR BLIMP OR BLIMPS OR DIRIGIBLE OR AEROSTAT? ?
S3	0	S1 AND S2

File 348:EUROPEAN PATENTS 1978-2004/Feb W05
File 349:PCT FULLTEXT 1979-2002/UB=20040304,UT=20040226
E2 12 AU=ANDERSON LLEWELLAN
E3 0 *AU=ANDERSON LLOYD R
E4 2 AU=ANDERSON LOA

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200416
File 347:JAPIO Nov 1976-2003/Nov(Updated 040308)
File 371:French Patents 1961-2002/BOPI 200209
Set Items Description
S1 38 AU='ANDERSON L R'
S2 18638 BALLOON? ? OR BLIMP OR BLIMPS OR DIRIGIBLE? ? OR AEROSTAT? ?
S3 1 S1 AND S2

3/7/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
015948357 **Image available**
WPI Acc No: 2004-106198/200411

Rigid helium balloon has connector engaged with opposing end of rod, to hold rod in channel formed in double seam

Patent Assignee: ANDERSON L R (ANDE-I)

Inventor: ANDERSON L R

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6659838	B1	20031209	US 2003366387	A	20030214	200411 B

Priority Applications (No Type Date): US 2003366387 A 20030214

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6659838	B1		6	A63H-003/06	

Abstract (Basic): US 6659838 B1

NOVELTY - A connector is engaged with one of the opposing ends of a rod, to hold the rod in the channel portion formed in the double seam where the skin portions are joined to form a channel.

USE - Rigid helium **balloon** .

ADVANTAGE - Prevents ascension of **balloon** by providing rods with counter balancing weight and hence **balloon** retains its shape and remains floating at a height from which it is released unless repositioned. Prevents floating of **balloon** upwards, without using additional weights or tethering devices.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the rigid helium **balloon** .

Helium **balloon** (10)

pp; 6 DwgNo 1/3

Derwent Class: A86; P36

International Patent Class (Main): A63H-003/06

File 9:Business & Industry(R) Jul/1994-2004/Mar 11
File 16:Gale Group PROMT(R) 1990-2004/Mar 11
File 160:Gale Group PROMT(R) 1972-1989
File 148:Gale Group Trade & Industry DB 1976-2004/Mar 05
File 47:Gale Group Magazine DB(TM) 1959-2004/Mar 12
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Mar 11
File 649:Gale Group Newswire ASAP(TM) 2004/Mar 11
File 636:Gale Group Newsletter DB(TM) 1987-2004/Mar 11
File 646:Consumer Reports 1982-2004/Feb
File 635:Business Dateline(R) 1985-2004/Mar 11
File 80:TGG Aerospace/Def.Mkts(R) 1986-2004/Mar 11
File 112:UBM Industry News 1998-2004/Jan 27
File 141:Readers Guide 1983-2004/Feb
File 481:DELPHES Eur Bus 95-2004/Feb W5
File 482:Newsweek 2000-2004/Mar 09
File 484:Periodical Abs Plustext 1986-2004/Mar W1
File 624:McGraw-Hill Publications 1985-2004/Mar 11

Set	Items	Description
S1	90538	BALLOON? ?
S2	19816	BLIMP OR BLIMPS OR DIRIGIBLE? ? OR AEROSTAT OR AEROSTATS OR AIRSHIP? ? OR ZEPPELIN? ? OR GASBAG? ? OR BALLONET? ?
S3	20900	LIGHTER()THAN()AIR OR INFLATABLE
S4	1365889	ROD OR RODS OR FRAME OR FRAMES OR FRAMING OR FRAMEWORK? ? - OR SKELETON OR SKELETAL
S5	2391723	STRUCTUR??
S6	2716897	SLEEVE? ? OR ENVELOPE? ? OR POCKET? ? OR CHANNEL? ? OR JACKET? ? OR SHEATH?? OR CASING? ? OR ENCASEMENT? ?
S7	941327	STRIP OR STRIPS OR STRAP OR STRAPS OR BAND OR BANDS
S8	4550	S1:S3(S)S4:S5
S9	1652	PC=(3069891 OR 372125 OR 3721196)
S10	199	S8(S)S6
S11	151	S8(S)S7
S12	8	S10(S)S11
S13	7	RD (unique items)
S14	7	Sort S13/ALL/PD,A
S15	334	S10:S11 NOT S12
S16	13	S9 AND S15
S17	10	RD (unique items)
S18	10	Sort S17/ALL/PD,A
S19	26852	S4:S5(5N)S6:S7
S20	1	S1:S3(S)S19 NOT (S12 OR S15) [not relevant]
S21	45194	S4:S5(10N)S6:S7
S22	1	S1:S3(S)S21 NOT (S12 OR S15 OR S20) [not relevant]

14/3,AB,K/3 (Item 3 from file: 141)
DIALOG(R)File 141:Readers Guide
(c) 2004 The HW Wilson Co. All rts. reserv.
03251984 H.W. WILSON RECORD NUMBER: BRGA96001984

Boy oh buoyant.

Kluger, Jeffrey.

Discover (Discover) v. 16 (Dec. '95) p. 50-3

WORD COUNT: 3071

ABSTRACT: The writer discusses the fact that on any given weekend the skies over New York are crisscrossed by a veritable exhalation of airships such as the Goodyear blimp, the Fuji blimp, the Sea World blimp, and the MetLife blimp. The evolution of these lighter-than-air flying ships is

discussed from the first working hot-air balloon launched in 1783 by the Montgolfier brothers down to the blimps of today.

TEXT:

... rely on materials not available to their nineteenth-century forebears. The main body of the **blimps** his company makes is composed of two parts: an inner layer (the bladder) and an outer layer, called an **envelope**. The bladder, which actually holds the helium, is made of leak-resistant polyurethane that's welded together from **strips**. A 130-foot-long bladder capable of holding 68,000 cubic feet of helium weighs...

...is not resistant to punctures, so it is protected by a comparatively heavy 450-pound **envelope** made of a polyester ripstop fabric. Although the **envelope** is the outer **structure**, it's actually a few inches smaller in volume than the polyurethane **balloon** it surrounds. This deliberately poor fit helps prevent ruptures by guaranteeing that when the **blimp** is fully inflated, it is the sturdier **envelope** rather than the thinner bladder that takes the load...

18/8/8 (Item 8 from file: 148)

DIALOG(R) File 148: (c) 2004 The Gale Group. All rts. reserv.

09833043 SUPPLIER NUMBER: 18471257 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Rigid returns. (rigid airships; Zeppelin Luftschifftechnik)

Nov 29, 1995

WORD COUNT: 1702 LINE COUNT: 00136

SPECIAL FEATURES: photograph; illustration

COMPANY NAMES: Zeppelin Luftschifftechnik--Product development

INDUSTRY CODES/NAMES: AERO Aerospace and Defense; BUSN Any type of business; INTL Business, International

DESCRIPTORS: Aerospace industry--Product development; Airships--Product development

PRODUCT/INDUSTRY NAMES: 3721251 (Airships ex Military)

18/3,AB,K/1 (Item 1 from file: 160)

DIALOG(R) File 160: Gale Group PROMT(R)

(c) 1999 The Gale Group. All rts. reserv.

01376238

Last flight of the lumberjack's airship.

NEW SCIENTIST July 10, 1986 p. 21

A hybrid helicopter-aided **airship** has crashed, damaging hopes that such vehicles could be used for forestry work. The Helistat was a giant helium **envelope** supported by an H-shaped aluminum **frame** with old helicopters attached to each corner to provide extra lift. On a test flight, 1 helicopter lost power at 12 m, causing the craft to tilt and crash. Critics had predicted trouble because of the problems of vibration, maintenance and stress on the craft. A smaller prototype developed by Aerocrane of Canada is still operating in trials for the Canadian Forestry Service. Helistat cost the US Forestry Service \$24 million to develop over 6 years.

PRODUCT CODE: 3721251

18/3,AB,K/2 (Item 2 from file: 80)

DIALOG(R) File 80: TGG Aerospace/Def. Mkts (R)

(c) 2004 The Gale Group. All rts. reserv.

01100896 Supplier Number: 39841144

Modernized ZPG-3W to feature new engine, radar, landing gear

Aerospace Daily, v139, n54, p430

Sept 16, 1986

Language: English Record Type: Abstract
Document Type: Magazine/Journal; Newsletter; Trade
ABSTRACT:

Goodyear Aerospace is offering the modernized ZPG-3W, which will have the original **envelope** and fin **structure** but a new engine, radar and landing gear, to fill the Navy's **airship** requirement. The modernized ZPG-3W has greater maneuverability with the use of turbines and electric motors to drive ducted propellers that can be pointed up or down for vertical thrust, cruising speeds of 5,000-10,000 ft, unrefueled endurance of 72 hrs, indefinite endurance with resupplying and refueling, flight controls using a fly-by-wire system that has lighter electrical connections instead of the usual cable and hydromechanical linkages, avionics incorporating those of the improved E-2C airborne early warning aircraft, electricity from an inboard turbine generator that also powers the **airship**'s radar and airborne electronics, enhanced visibility with high quality optics transparencies, and more comfortable private quarters for a 12-man crew. The modernized ZPG-3W will be built and flying by 1990. Goodyear is also offering the GZ-22, a 'super Goodyear **blimp**' that can be used as an 'instant trainer for the ZPG-3W. The GZ-22 will have its first flight as well as its FAA certification in FY87.

PRODUCT NAMES: 3721196 (Military Airships & Balloons)

18/3,AB,K/3 (Item 3 from file: 160)

DIALOG(R) File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.
01600383

Business aviation:Airship seeks Japan link.

FLIGHT INTERNATIONAL March 14, 1987 p. 15

Airship Industries (UK) may jointly develop a 100-passenger **airship** with Mitsui OSK (Japan), a shipping firm. In the event of **Airship** Industries winning a US Navy contract for a huge radar-carrying surveillance craft, both firms will develop a 500 ft-long **airship**, capable of carrying passengers or performing paramilitary tasks. The 1 **airship** concerned in the Skyship 600, with the future passenger **airship** capable of reaching 80 knots and comprising a largely composite **structure** with a non-rigid **envelope**.

PRODUCT CODE: 3721251 ; 3721196

18/3,AB,K/4 (Item 4 from file: 16)

DIALOG(R) File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.
01394187 Supplier Number: 41660248

TECHNICAL: GENERAL AVIATION: Virgin favours American Blimp

Flight International, v138, n4240, p20

Nov 6, 1990

Language: English Record Type: Abstract
Document Type: Magazine/Journal; Trade
ABSTRACT:

Virgin Lightship, a US subsid of the Virgin entertainment and airline group (UK), will take delivery of the first American **Blimp** A-60 Lightship during 12/90. The twin-engine **airship** will be used in Long Beach, CA, to advertise Virgin Atlantic Airways' US services. Virgin, to date the sole A-60 customer, has 8 of the **blimps** on firm order and 12 more on option. The A-60 was first flown in 11/89 and finished FAA certification testing in 5/90. Its 39-m **envelope** is supplied by Aerostar; the gondola and fin

frames come from Avtek Industries.

PRODUCT NAMES: 4501000 (Passenger Air Transport); 3721251 (Airships
ex Military)

18/3,AB,K/5 (Item 5 from file: 80)

DIALOG(R)File 80:TGG Aerospace/Def.Mkts(R)

(c) 2004 The Gale Group. All rts. reserv.

01234837 Supplier Number: 41803784

Sentinels in the sky

Jane's Defence Weekly, v15, n3, p87,89

Jan 19, 1991

Language: English Record Type: Abstract

Document Type: Magazine/Journal; Trade

ABSTRACT:

Westinghouse is developing the Sentinel series of **airships** for the US DoD. Westinghouse purchased the military rights to the Sentinel series after its UK partner, Air Ship Industries went into receivership. The Sentinel 1000 is the smallest of the series, with an **envelope** of 67+ m in length, and with a gondola of 11.6 m long, of which nearly 7 m is usable cabin. The Sentinel 1000 is to have a normal cruising speed of 35 kn, with a top continuous speed of 57 kn, and a maximum altitude of 2,700 m. Depending on the temperature, mission load, and helium fill, typical endurance would be 30 hrs. The 1000 is viewed as a short-to-medium endurance aircraft to be used in fire watch patrol, anti-drug, mine countermeasures, and naval blockade missions. The initial unit is approaching completion and a first flight is slated in the near future. Another in the series is the Sentinel 1200 which is derived from the 1000, but lengthened for use in hot weather. It has a length of 71.5 m and a top speed of 52 kn. It would also have just under a 5,670 kg **structural** disposable load vs almost 4,100 kg (includes crew, furnishings, fuel, and equipment) for the 1000. The Sentinel 1000 is for the most part, a proving vehicle for the Sentinel 5000, designated the YEZ-2A by the US Navy. The 5000 would be capable of operating with surface attack groups and as an independent AEW system. A single demonstration model (and its associated systems and sensors) is being developed under a \$169 mil contract, which is said to be under re-negotiation. The 5000 has a length of 130 m and is the biggest non-rigid airship ever built. The 5000 is slated for an initial flight in 1992. The article contains additional information on all 3 of the aforementioned **airships**.

PRODUCT NAMES: 3721196 (Military Airships & Balloons)

18/3,AB,K/6 (Item 6 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)

(c) 2004 The Gale Group. All rts. reserv.

02763785 Supplier Number: 43704976

Would you like to fly ...

The Engineer, p22

March 11, 1993

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Academic

Word Count: 1339

... until 1962.

Using the latest in lightweight composites and advanced fabrics, the new class of **airship** was marketed as a cheap way to stay aloft for a long time. Lift comes from helium in a gas-tight **envelope**. Unlike their predecessors, there is no metal **framework** and the **structure** is kept

rigid by pressurising the **envelope**. A glass-reinforced plastic nosecone and battens help maintain its shape against the wind. Slung beneath this helium bubble is a gondola made from aerospace composites such as kevlar. The **airship** is usually powered by twin engines, driving propellers. Performance is a trade-off between range...

PRODUCT NAMES: 3721251 (Airships ex Military)

18/3,AB,K/7 (Item 7 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.
02793568 Supplier Number: 43750283

WESTINGHOUSE FORGES FUTURE FOR AIRSHIPS

Interavia Aerospace World, p68
April, 1993

Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 589

... In reality, however, the Sentinel programme is simply a rehearsal for the larger Navy **airship** project. Compared to the Sentinel 1000, the Navy ship would have an **envelope** volume of around 2.5 million cu.ft./70,800 cu.metres, a length of about 425 ft/130m, a maximum **structural** disposable load of approximately 60,000lb/27,216kg, a maximum cruise speed of 82kts...

PRODUCT NAMES: 3721196 (Military Airships & Balloons)

18/3,AB,K/9 (Item 9 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.
04094140 Supplier Number: 45966326

Rigid returns: Despite a troubled history, airship maker Zeppelin is making a comeback.

Flight International, p34
Nov 29, 1995

Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1587

... accounting for a large chunk of operational costs.

It was also found that the traditional **Zeppelin** concept of a rigid **frame** inside the hull of the **airship** still offered advantages in safety - maintaining the shape of the **envelope** at higher speeds and in sharper manoeuvres - and performance, allowing more convenient location of propulsion...

PRODUCT NAMES: 3721250 (Airships & Balloons ex Military)

18/3,AB,K/10 (Item 10 from file: 16)

DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2004 The Gale Group. All rts. reserv.
05492641 Supplier Number: 48322358

Airships set for a comeback?

Rentell, Michael E.
Interavia Business & Technology, p37
March, 1998

Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 1700

... The significant feature of the NT series is they are semi-rigid - there is a **structure** inside the **envelope** although not the enormous

ASRC Searcher: Jeanne Horrigan
Serial 10/643780
March 12, 2004

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spider-web of girders used in the earlier **Zeppelins** . The company has spent some DM40 million (\$22.7 million) in developing the NT **airship** which is being offered at DM12.5 million. Five orders have been placed. The prototype...

...test flights it is already carrying advertising. Skyship Cruise Ltd plans to purchase several more **Zeppelins** if the initial programme is successful. Others are destined for three German customers...

PRODUCT NAMES: 3721250 (Airships & Balloons ex Military)

File 609:Bridge World Markets 2000-2001/Oct 01
File 809:Bridge World Markets News 1989-1999/Dec 31
File 610:Business Wire 1999-2004/Mar 12
File 810:Business Wire 1986-1999/Feb 28
File 613:PR Newswire 1999-2004/Mar 12
File 813:PR Newswire 1987-1999/Apr 30

Set	Items	Description
S1	17297	BALLOON? ?
S2	2081	BLIMP OR BLIMPS OR DIRIGIBLE? ? OR AEROSTAT OR AEROSTATS OR AIRSHIP? ? OR ZEPPELIN? ? OR GASBAG? ? OR BALLONET? ?
S3	2528	LIGHTER()THAN()AIR OR INFLATABLE
S4	223910	ROD OR RODS OR FRAME OR FRAMES OR FRAMING OR FRAMEWORK? ? - OR SKELETON OR SKELETAL
S5	401985	STRUCTUR??
S6	595593	SLEEVE? ? OR ENVELOPE? ? OR POCKET? ? OR CHANNEL? ? OR JAC- KET? ? OR SHEATH?? OR CASING? ? OR ENCASEMENT? ?
S7	204609	STRIP OR STRIPS OR STRAP OR STRAPS OR BAND OR BANDS
S8	1799	S4:S5(5N)S6
S9	1799	S4:S5(5N)S6
S10	1	S1:S3(S)S8(S)S9 [not relevant]
S11	646	S4:S5(5N)S7
S12	0	S8(S)S11(S)S1:S3
S13	0	S4:S5(S)S6(S)S7(S)S1:S3
S14	0	S1:S3/TI,DE AND S4:S5(S)S6(S)S7
S15	22	S1:S3(S)S4:S5(S)S6:S7
S16	2443	S4:S5(5N)S6:S7
S17	1	S15 AND S16 [not relevant]
S18	21	S15 NOT (S10 OR S17)
S19	20	RD (unique items)

19/8/20 (Item 9 from file: 813)
DIALOG(R)File 813:(c) 1999 PR Newswire Association Inc. All rts. reserv.
0126807 LA019
WEEK OF FESTIVE BENEFIT SCREENINGS PLANNED TO PRECEDE OPENING OF AMC
PLEASURE ISLAND 10 THEATERS AT WALT DISNEY WORLD RESORT
DATE: December 6, 1988
WORD COUNT: 826
SECTION HEADING: ASSIGNMENT; CITY; ENTERTAINMENT

19/3,AB,K/7 (Item 2 from file: 610)
DIALOG(R)File 610:Business Wire
(c) 2004 Business Wire. All rts. reserv.
00728183 20020610161B9907
Accurate Attitude Determination is Critical to Air Force's Tethered
Aerostat Radar System-Thales Navigation's Ashtech ADU2 GPS Receivers Ensure
Accurate Real-Time Data for Federal Drug Interdiction Efforts
Business Wire
Monday, June 10, 2002 13:01 EDT
JOURNAL CODE: BW LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
DOCUMENT TYPE: NEWSWIRE
WORD COUNT: 909
...and Reliable GPS Measuring 420,000 cubic feet, about twice the volume of a
Goodyear blimp , a TARS aerostat is a balloon that can rise to 15,000
feet while tethered by cable to a ground-based...
...is filled with helium and the lower chamber is a pressurized air
compartment, called a ballonnet . The radar is attached to an aerostat 's

belly inside a windscreen compartment, a pressurized **envelope** that protects the radar from wind and other hazards. A payload support **structure**, or ring, is at the bottom of the **aerostat**, linked to the **ballonet**. The GPS antenna is mounted on the inside of the **aerostat** and attached to the payload ring to achieve sufficient rigidity for accurate azimuth data...

19/3,AB,K/12 (Item 1 from file: 813)

DIALOG(R)File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

1414801

DCTU014

Cable & Wireless Balloon Modified for Endurance Flight

DATE: February 2, 1999 10:37 EST WORD COUNT: 650

...possible, the project's pilot and engineer, Andy Elson, then set to work modifying the **balloon** for its new task. He wanted the capsule to carry an extra two tons of...

... the whole of the flight and not jettisoned. To carry this extra weight, the capsule **structure** has also needed to be strengthened and the **envelope** cables reinforced. Bristol company, Certex, is behind the specially developed strengthened cables.

Andy Elson commented...

19/3,AB,K/13 (Item 2 from file: 813)

DIALOG(R)File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

1397709

PHW004

Rigid Airship USA, Inc. Announces Restructuring of Synfuel Technology Inc.

DATE: December 30, 1998 12:12 EST WORD COUNT: 484

... Partner at RJ Walls & Company, then Chief Operating Officer of Stone & McCarthy Research Associates.

Rigid **Airships** are fabric-covered **dirigibles** containing cellular **pockets** of nonflammable helium. The ships are propelled and steered by highly efficient, quiet, and environmentally friendly engines. Passengers or freight are carried within space comprised by the rigid girder and **frame structure**, rather than in the confining external gondola used by conventional **dirigibles**. Rigid **Airship** passengers may enjoy the comfort and luxury of restaurants, bar areas, and recreation facilities while...

... the extraordinary views afforded by flight at 1500 feet. An extensive description of the Rigid **Airship** can be accessed at "www.rigidair.com"...

19/3,AB,K/14 (Item 3 from file: 813)

DIALOG(R)File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

1388786

DCTU028

Cable & Wireless Balloon Sets Off to Launch Site

DATE: December 8, 1998 14:29 EST WORD COUNT: 667

...road to Almeria, Southern Spain. The whole journey is expected to last 3 days.

The **balloon envelope** is already at the launch site and the pilots will be traveling out to meet the gondola later this week. The unpacking of this extremely delicate **structure** is likely to take a couple of days, following which it would be possible for the **balloon** to start its 72 hour countdown, given the correct weather conditions...

File 111:TGG Natl.Newspaper Index(SM) 1979-2004/Mar 12
File 144:Pascal 1973-2004/Feb W5
File 583:Gale Group Globalbase(TM) 1986-2002/Dec 13
File 323:RAPRA Rubber & Plastics 1972-2004/Mar
File 6:NTIS 1964-2004/Mar W1
File 8:Ei Compendex(R) 1970-2004/Feb W5
File 99:Wilson Appl. Sci & Tech Abs 1983-2004/Feb
File 35:Dissertation Abs Online 1861-2004/Feb
File 65:Inside Conferences 1993-2004/Mar W1
File 94:JICST-EPlus 1985-2004/Feb W5
File 34:SciSearch(R) Cited Ref Sci 1990-2004/Mar W1
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec

Set	Items	Description
S1	75763	BALLOON? ?
S2	4414	BLIMP OR BLIMPS OR DIRIGIBLE? ? OR AEROSTAT OR AEROSTATS OR AIRSHIP? ? OR ZEPPELIN? ? OR GASBAG? ? OR BALLONET? ?
S3	7047	LIGHTER()THAN()AIR OR INFLATABLE
S4	1208491	ROD OR RODS OR FRAME OR FRAMES OR FRAMING OR FRAMEWORK? ? - OR SKELETON OR SKELETAL
S5	6087726	STRUCTUR??
S6	1120784	SLEEVE? ? OR ENVELOPE? ? OR POCKET? ? OR CHANNEL? ? OR JACKET? ? OR SHEATH?? OR CASING? ? OR ENCASEMENT? ?
S7	911271	STRIP OR STRIPS OR STRAP OR STRAPS OR BAND OR BANDS
S8	20	S1:S3 AND S4:S5 AND S6 AND S7
S9	19	RD (unique items)
S10	0	S9/2004
S11	2	S9/2003 [not relevant]
S12	17	S9 NOT S11
S13	17	Sort S12/ALL/PY,A
S14	252	S1:S2 AND S4:S5(S)S6:S7
S15	95	S1:S2/TI,DE AND S14
S16	156732	S4:S5(5N)S6:S7
S17	29	S15 AND S16
S18	29	S17 NOT S8
S19	21	RD (unique items)
S20	0	S19/2004
S21	2	S19/2003
S22	19	S19 NOT S21
S23	19	Sort S22/ALL/PY,A
S24	3	S1 AND S3 AND S16
S25	0	S24 NOT (S8 OR S17)

13/7/3 (Item 3 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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02282446 E.I. Monthly No: EIM8710-071859

TO THE PROBLEM OF FULL OPENING OF THE AIR-SUPPORTED HEMISPHERICAL DOME.

Author: Yermolov, Vadim V.

Corporate Source: Moscow Inst of Architecture, Moscow, USSR

Conference Title: International Association for Shell and Spatial Structures International Congress: Theory and Experimental Investigation of Spatial Structures, Application of Shells in Engineering Structures.

Conference Location: Moscow, USSR Conference Date: 19850923

Sponsor: Int Assoc for Shell & Spatial Structures, Madrid, Spain

E.I. Conference No.: 09526

Source: v 4. Publ by USSR Gosstroy, Central Scientific Research Inst of

Building Structures, Moscow, USSR p 40-45

Publication Year: 1985

Language: English

Document Type: PA; (Conference Paper)

Journal Announcement: 8710

Abstract: One of possible ways of realisation of the idea of temporal rigidization of an air-supported dome-like **structure** by inflating the air into **strips**, sewed (glued, welded) on the surface of an **envelope**, forming its **framework**, is described. The calculations show that a spherical dome with a diameter of 70 m demands a sewing upon it of three **strips** meeting at one point, each 8 m wide. By an overpressure of 8 kPa in the arches, the hoop tension reaches 20 kN/m, which by a twofold margin, corresponds to a material with a strength of 40 kN/m, that is the material of which the main **envelope** is made. (Edited author abstract)

13/7/5 (Item 5 from file: 323)

DIALOG(R) File 323:RAPRA Rubber & Plastics

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00340257

TITLE: AIRTIGHT ENVELOPE

SOURCE: European Rubber Journal; 169, No.7, July/Aug.1987, p.36

ISSN: 0260-5317

CODEN: ERJTDW JOURNAL ANNOUNCEMENT: 198711 RAPRA UPDATE: 198722

DOCUMENT TYPE: Journal Article

LANGUAGE: English

SUBFILE: (R) RAPRA

ABSTRACT: An airtight elastomeric **envelope** developed by Manfred Vetter, a West German inventor, is said to eliminate the currently used rubber **strips** that cause uneven pressures when the **envelope** is inflated. The design of the unvulcanised NR **envelope** is briefly described demonstrating the size and shape of the opening section

13/7/14 (Item 14 from file: 6)

DIALOG(R) File 6:NTIS

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2182077 NTIS Accession Number: N20000088652/XAB

Item Description: ISS TransHab Restraint Sample and Photo Documentation
Adams, C.

Lockheed Martin Corp., Houston, TX. Space Mission Systems and Services.
Corp. Source Codes: 113611001; L1323820

Sponsor: National Aeronautics and Space Administration, Washington, DC.
2000 5p

Languages: English

Journal Announcement: USGRDR0101; STAR0103

Presented at Space Architecture Chicago, IL 1 Feb. 2000.

Order this product from NTIS by: phone at 1-800-553-NTIS (U.S. customers); (703)605-6000 (other countries); fax at (703)605-6900; and email at orders@ntis.fedworld.gov. NTIS is located at 5285 Port Royal Road, Springfield, VA, 22161, USA.

NTIS Prices: PC A01/MF A01

Country of Publication: United States

Contract No.: NAS9-18800

The yellow **strap** seen in the display is a piece of the main restraint layer of a test article for the ISS TransHab spacecraft, First conceived as a technology which is capable of supporting a (human) crew of six on an extended space journey such as the six-month trip to Mars, TransHab (short

for 'Transit habitat') is the first space **inflatable** module ever designed. As this text is written it is being considered as a replacement for the Habitation module on the International Space Station (ISS). It constitutes a major breakthrough both in technology and in tectonics: capable of tight packaging at light weight for efficient launch, the vehicle can then be inflated to its full size on orbit via its own inflation tanks. This is made possible by the separation of its main **structural** elements from its pressure-shell. In other words, all spacecraft flown to date have been of an exoskeletal type---i.e., its hard outer shell acts both as a pressure container and as its main **channel** for **structural** loading. This includes the ISS, which is currently under construction in Low Earth Orbit (275 miles above the Earth). By contrast TransHab is the first endoskeletal space Habitat, consisting of a dual system: a light, reconfigurable central **structure** of graphite composite and a multilayered, deployable pressure shell.

21/7/1 (Item 1 from file: 144)

DIALOG(R) File 144:Pascal

(c) 2004 INIST/CNRS. All rts. reserv.

16008715 PASCAL No.: 03-0154117

Structural analysis of pneumatic envelopes : Variational formulation and optimization-based solution process

BAGINSKI Frank E; SCHUR Willi W

George Washington University, Washington, D.C. 20052, United States; New Mexico State University, Wallops Island, Virginia 23337, United States

Journal: AIAA journal, 2003, 41 (2) 304-311

ISSN: 0001-1452 CODEN: AIAJAH Availability: INIST-214;

354000104100590200

No. of Refs.: 11 ref.

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United States

Language: English

Large super-light **structural** systems that for functional reasons require large surfaces are composed at least in part of **structural** membranes. The underconstrained nature of such **structural** membranes poses analytical challenges, but also provides design opportunities that are not commonly found in other **structural** systems that require the arsenal of solid-mechanics analytical tools for the assessment of design validity and performance. Overcoming some of the challenges that are posed by the underconstrained nature of such systems is an important ingredient in the development process for gossamer spacecraft. Our approach is a variational formulation of the analytical problem in conjunction with optimization techniques in the solution process. The optimization-based solution process avoids convergence problems that are encountered in the implicit solution process of finite element formulations of these underconstrained **structures**. To illustrate our approach, we carry out a **structural** analysis of a pumpkin **balloon**. Our formulation incorporates wrinkling of the **balloon** film and **structural** lack of fit between the skin and the tendon in the unloaded, that is, unstrained, **structure**. Our results on pumpkin **balloons** suggest the possibility of similar success if our methods are applied to other pneumatic **envelopes**.

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21/7/2 (Item 1 from file: 94)

DIALOG(R) File 94:JICST-EPlus

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05596656 JICST ACCESSION NUMBER: 03A0703125 FILE SEGMENT: JICST-E
On the Design Issues of a Stratospheric Platform Airship Structure.

MAEKAWA SHOJI (1)

(1) National Aerospace Lab.

Koku Uchu Gijutsu Kenkyujo Shiryo NAL, TM(Technical Memorandum of National
Aerospace Laboratory), 2003, NO.772, PAGE.13P, FIG.13, TBL.4, REF.25

JOURNAL NUMBER: G0517AAX ISSN NO: 1347-460X

UNIVERSAL DECIMAL CLASSIFICATION: 629.7.01/.02

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: Attention is being drawn to the possibility of the **airship** as a stratospheric platform, as communication technology develops. The **airship** was invented toward the end of the 19th century, and subsequently made rapid progress, falling into a rapid decline however with the remarkable advance of aircraft technology. Nowadays only small **airships** are utilized, for sightseeing and advertising. **Airships** are thought more suitable when the purpose is to remain stationary at high altitudes, because they gain lift by gas buoyancy, in contrast to aircraft, which gain lift by advance speed. In the concept of the stratospheric platform, many **airships** are floated in the stratosphere serving as platforms for communications, broadcasting or ground observation. As part of efforts to promote this concept, a Ground-to-Stratosphere Flight Test Vehicle and a Low-Altitude-Stationary Flight Test Vehicle are currently being developed. Many technical issues have emerged in the development of these vehicles. However a much severer design will be required to allow stationary flight at around an altitude of 20km in the development of the stratospheric platform. Therefore research should be performed not only on the technical issues identified in the current test vehicle development, but also on issues in the stratospheric platform development. This memorandum discusses the design issues of an **airship structure** rather than the overall technical problems of the stratospheric platform. The topics covered are **airship** specifications, **structure** style, **envelope** materials, loads, stresses, sloshing, and test methods. (author abst.)

23/6/12 (Item 12 from file: 144)

13124175 PASCAL No.: 97-0106321

Complete acoustic stop bands for cubic arrays of spherical liquid balloons

1996-09-15

23/6/17 (Item 17 from file: 323)

00834681

TITLE: ZEPPELIN FLIES AGAIN

23/6/18 (Item 18 from file: 8)

06393610

Title: On the background rate in the LXeGRIT instrument during the 2000 balloon flight

Conference Title: X-Ray and Gamma-Ray Telescopes and Instruments for Astronomy

Publication Year: 2002

23/7/2 (Item 2 from file: 6)

DIALOG(R) File 6:NTIS

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0909929 NTIS Accession Number: AD-A101 414/1/XAB

Need to Reevaluate Helistat Program Objectives and Progress

General Accounting Office, Washington, DC. Mission Analysis and Acquisition Div.

Corp. Source Codes: 010682020; 412187

Report No.: GAO/MASAD-81-31

2 Jun 81 12p

Languages: English

Journal Announcement: GRAI8123

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NTIS Prices: PC A02/MF A01

Country of Publication: United States

The purpose of the Helistat program is to demonstrate that aerial logging operations are economical in steep mountainous terrain. To do this, the Forest Service is developing a **lighter-than-air** vehicle consisting of a 343-foot long **blimp envelope** with a **frame** which has four SH34J helicopters attached to it. In managing the program, the Forest Service has unnecessarily tied program milestones to land management planning time **frames** and moved too hastily, thereby overlooking essential considerations in planning a development strategy. For example, potential users were not contacted before beginning the program to get their participation and advice for determining the need for, uses of, and operational requirements for a Helistat concept vehicle. Information which we have developed from contacting potential users shows that it is questionable whether the Helistat concept under development will have practical application as a timber harvesting method. We believe more fundamental acquisition management principles should be used in planning and managing the Helistat program. This will require user participation and advice to assure industry interest in the program and development of a vehicle that meets user needs.

23/7/7 (Item 7 from file: 323)

DIALOG(R) File 323:RAPRA Rubber & Plastics

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00312902

TITLE: AIRSHIP TAKES PART IN FOUR-FLIGHTS-A-DAY SERVICE

SOURCE: Plastics and Rubber Weekly; No.1140, 31st May 1986, p.1

ISSN: 0032-1168

JOURNAL ANNOUNCEMENT: 198608 RAPRA UPDATE: 198615

DOCUMENT TYPE: Journal Article

LANGUAGE: English

ABSTRACT: **Airship** Industries owns an **airship** with its **structure** consisting of a polyester **envelope** internally coated with PU, which takes part in a four-flights-a-day service over central London, the first scheduled **airship** service since 1937. The company is winding the service up on June 15 and beginning it again in Autumn 1986, or next year, when it will replace the present '500' gondolas with larger capacity '600's. There are no plans to travel further afield for the moment, although this could happen in future. This abstract includes all the information contained in the original article.

23/7/10 (Item 10 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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03060359 Genuine Article#: BZ78B Number of References: 2

Title: RECENT ADVANCES IN THE STRUCTURAL-ANALYSIS OF SCIENTIFIC BALLOONS

Author(s): SCHUR WW

Corporate Source: NEW MEXICO STATE UNIV, PHYS SCI LAB, FIELD ENGN

GRP, NASA, WALLOPS FLIGHT FACIL/WALLOPS ISL//VA/23337

Journal: ADVANCES IN SPACE RESEARCH, 1993, V14, N2, P43-47

ISSN: 0273-1177

Language: ENGLISH Document Type: REVIEW

Abstract: The analysis of **balloon envelopes** by the finite element (FE) method is plagued by convergence problems. A practical FE analysis approach is based on the fact that in thin shells with non-zero Gaussian curvature the membrane solution component is essentially decoupled from the bending solution component. A proxy-problem is solved by using a small artificial bending stiffness that assures convergence without significantly affecting the membrane solution component. This approach has been previously validated on slightly overpressurized **balloon envelopes**. Extensions of this approach to more difficult problems in the **structural analysis of balloon envelopes** are presented. The convergence forcing modelling measures are discussed. Implications of the findings of the analysis results to future **balloon** designs are also discussed.

23/7/13 (Item 13 from file: 144)

DIALOG(R)File 144:Pascal

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13369878 PASCAL No.: 97-0555272

Stop bands for cubic arrays of spherical balloons

KUSHWAHA M S; HALEVI P

Instituto de Fisica, Universidad Autonoma de Puebla, Apartado Postal J-48, Puebla 72570, Pue., Mexico; Instituto Nacional de Astrofisica, Optica y Electronica, Apartado Postal 51, Puebla 72000, Pue., Mexico

Journal: The Journal of the Acoustical Society of America, 1997-01, 101 (1) 619-622

ISSN: 0001-4966 CODEN: JASMAN Availability: INIST-129

Document Type: P (Serial) ; A (Analytic)

Country of Publication: United States

Language: English

The acoustic **band structures** have been computed for cubic arrays of spherical hydrogen **balloons** in air. Stop **bands** are obtained for the face-centered-cubic (fcc) and body-centered-cubic (bcc) lattices, however, there is no **band** gap for the simple cubic lattice. These gaps are largest for a volume fraction of similar 38% and, at low **balloon** pressure (1.10 atm) and small latex wall thickness (10-3 times the inner radius), the corresponding gap/midgap ratios are about 0.2 for the fcc and 0.1 for the bcc **structure**. As the pressure or wall thickness increases, the stop **bands** diminish and ultimately vanish. (c) 1997 Acoustical Society of America. Copyright (c) 1997 American Institute of Physics. All rights reserved.

23/7/15 (Item 15 from file: 323)

DIALOG(R)File 323:RAPRA Rubber & Plastics

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00749618

TITLE: MECHANICAL BEHAVIOUR OF FABRIC-FILM LAMINATES

AUTHOR(S): Sai M A

CORPORATE SOURCE: NASA

CONFERENCE PROCEEDINGS: Antec '99. Volume II. Conference proceedings

CORPORATE EDITOR: SPE

SOURCE: New York City, 2nd-6th May 1999, p.2570-2. 012

JOURNAL ANNOUNCEMENT: 199912 RAPRA UPDATE: 199924

DOCUMENT TYPE: Conference Papers

LANGUAGE: English

SUBFILE: (R) RAPRA

ABSTRACT: Inflatable **structures** are gaining wide support in planetary scientific missions as well as commercial applications. For such applications a new class of materials made of laminating thin homogeneous films to lightweight fabrics are being considered as **structural gas envelopes**. The emerging composite materials are a result of recent advances in the manufacturing of lightweight, high strength fibres, fabrics and scrim. The lamination of these load-carrying members with the proper gas barrier film results in a wide range of materials suitable for various loading and environmental conditions. Polyester-based woven fabrics laminated to thin homogeneous film of polyester (Mylar) are an example of this class. This fabric/film laminate is being considered for the development of a material suitable for building large gas **envelopes** for use in the NASA Ultra Long Duration **Balloon** Program (ULDB). Compared to commercial homogeneous films, the material provides relatively high strength-to-weight ratio as well as better resistance to crack and tear propagation. The mechanical behaviour of this class of multi-layer composite is introduced and some of the concerns observed during the characterisation of these laminate composites are highlighted. 6 refs.

23/7/16 (Item 16 from file: 8)

DIALOG(R) File 8: Ei Compendex(R)

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05579056 E.I. No: EIP00065194642

Title: Japanese balloon program

Author: Nishimura, J.

Corporate Source: Yamagata Acad of Technology, Tokyo, Jpn

Conference Title: PSB1 Symposium of the COSPAR Panel on Technical Problems Related to 'Scientific Ballooning' - 32nd COSPAR Scientific Assembly

Conference Location: Nagoya, Jpn Conference Date: 19980712-19980719

Sponsor: AIAA; NASA; NFS; COSPAR

E.I. Conference No.: 56848

Source: Advances in Space Research v 26 n 9 2000. p 1313-1322

Publication Year: 2000

CODEN: ASRSDW ISSN: 0273-1177

Language: English

Document Type: JA; (Journal Article) Treatment: G; (General Review)

Journal Announcement: 0007W4

Abstract: In mid 1960s, ISAS founded the Japanese scientific ballooning program. The **balloon** group focused mainly in the development of the **balloon** technologies and scientific observations in collaboration with scientists and engineers in other universities and organizations. This article presents an overview of several subjects of recent activities. 27 Refs.

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200416

File 347:JAPIO Nov 1976-2003/Nov(Updated 040308)

File 371:French Patents 1961-2002/BOPI 200209

Set	Items	Description
S1	18110	BALLOON? ?
S2	1638	BLIMP OR BLIMPS OR DIRIGIBLE? ? OR AEROSTAT OR AEROSTATS OR AIRSHIP? ? OR ZEPPELIN? ? OR GASBAG? ? OR BALLONET? ?
S3	24533	LIGHTER()THAN()AIR OR INFLATABLE
S4	1440204	ROD OR RODS OR FRAME OR FRAMES OR FRAMING OR FRAMEWORK? ? - OR SKELETON OR SKELETAL
S5	1582266	STRUCTUR??
S6	1214595	SLEEVE? ? OR ENVELOPE? ? OR POCKET? ? OR CHANNEL? ? OR JACKET? ? OR SHEATH?? OR CASING? ? OR ENCASEMENT? ?
S7	650365	STRIP OR STRIPS OR STRAP OR STRAPS OR BAND OR BANDS
S8	370	IC=A63H-003/06
S9	615	LIGHTER()THAN()AIR
S10	19769	S1 OR S2 OR S9
S11	6599	S4:S5(S)S6(S)S7
S12	11	S10 AND S11
S13	0	S8 AND S11
S14	0	S4:S5 AND S6 AND S7 AND S8
S15	9	S4:S5 AND S6:S7 AND S8
S16	9	S15 NOT S12
S17	411	S10 AND S4:S5(S)S6:S7
S18	221	S10/TI AND S17
S19	111	S10(S)S4:S5(5N)S6:S7
S20	76	S10/TI AND S19
S21	3	S6 AND S7 AND S20
S22	1	S21 NOT (S12 OR S15)
S23	66	S4:S5(3N)S6:S7(S)S10
S24	46	S10/TI AND S23
S25	43	S24 NOT (S12 OR S15 OR S21)
S26	29	S20 NOT (S12 OR S15 OR S21 OR S24)

12/7,K/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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012757709 **Image available**

WPI Acc No: 1999-563828/199948

Inflatable balloon for advertising and display purposes

Patent Assignee: ECA 2 (ECAT-N)

Inventor: PEPIN Y

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2775653	A1	19990910	FR 982845	A	19980309	199948 B

Priority Applications (No Type Date): FR 982845 A 19980309

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
FR 2775653	A1	15	B64B-001/50	

Abstract (Basic): FR 2775653 A1

NOVELTY - The inflatable **balloon** includes multiple tethering wires to provide stability.

DETAILED DESCRIPTION - The inflatable **balloon structure** (10) comprises a flexible **envelope** which is adopts an ovoid shape when inflated, with the lower end fastened to the ground The ovoid is formed

in three sections (I, II, III) forming the lower, central and upper sections. Within the **structure** there are horizontal circular **bands** to which retaining wires are attached at spaced points (1-6, A-I, a-i). These wires extend to the ground in order to ensure that the **balloon** is stabilized, and the fabric kept under tension with the pressure of air inside. Some points are connected externally, and some are connected internally. The wire lengths may be controlled during inflation, under the control of a central programmer.

USE - Control of inflatable **balloon** used for public performances and demonstrations.

ADVANTAGE - Provides enhanced stability in wind, and assists in elegant inflation and deflation of **balloon** in front of spectators.

DESCRIPTION OF DRAWING(S) - The figure shows the inflated **balloon**. inflatable **balloon** structure (10)

spaced points (1-6, A-I, a-i)

pp; 15 DwgNo 2/3

Derwent Class: P36; P82; Q25

International Patent Class (Main): B64B-001/50

International Patent Class (Additional): A63J-023/00; G03B-021/58

12/7,K/8 (Item 8 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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010888775 **Image available**

WPI Acc No: 1996-385726/199639

Model airship which is capable of flying - has very light frame construction mostly made of balsa wood strips with gas-tight casing for receiving helium gas

Patent Assignee: SAX F (SAXF-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 29609516	U1	19960822				199639 B

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 29609516	U1		7	A63H-027/18	

Abstract (Basic): DE 29609516 U

Twelve segments are used to form the transverse **frame** (1) and are formed from 1.5 mm balsa wood with a height of 14 mm. The individual segments are adhered together by means of an additional small piece (2) of balsa wood. At each of the twelve corner points, a longitudinal strip (3) is adhered in an insert.

The twelve segments run over the complete length of the **airship** and are brought together at the bow and the stern, thus forming the shape of a known **zeppelin**. To save wt. no controllable side rudder is incorporated and steering in a horizontal direction is by means of two separately controllable motors on the left and right sides of the **airship**.

ADVANTAGE - The model **airship** is ideal for taking aerial photographs and for publicity purposes, partic. in exhibition halls.

Dwg.3/4

Derwent Class: P36

International Patent Class (Main): A63H-027/18

12/7,K/9 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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010392353 **Image available**
WPI Acc No: 1995-293666/199539

Confectionery packing - comprises box with head and feet, head consisting of inflatable toy balloon and feet folded out from bottom

Patent Assignee: ANAGRAM BALLON GMBH (ANAG-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4405118	A1	19950824	DE 4405118	A	19940217	199539 B

Priority Applications (No Type Date): DE 4405118 A 19940217

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 4405118	A1		4	B65D-025/20	

Abstract (Basic): DE 4405118 A

The confectionery packing comprises a box (1) for the confectionery, with the box having head and feet. The head consists of an inflatable **balloon** composed of two sealed sheets one above the other, welded together at the edges. It also has feet (4) on the underside (7) of the box. The **balloon** is attached to the top of the box by a radial strap.

The **strap** fits in a **casing** which in-turn fits in a bore in the top (6) of the box. A spiral spring (19) sits between the connecting element (5) and the toy **balloon**. The box has a **rod** (14) which is connected to the **strap** or to the connecting element carrying the **balloon**.

ADVANTAGE - More attractive to potential customers.

Dwg.1,3/3

Derwent Class: Q32; Q34

International Patent Class (Main): B65D-025/20

International Patent Class (Additional): B65D-005/44; B65D-085/60

16/26, TI/7 (Item 7 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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009121834

WPI Acc No: 1992-249271/199230

Network for multiple spout balloons - has tubular frame with plugs to attach balloons at spouts

16/7, K/2 (Item 2 from file: 350)

DIALOG(R) File 350: Derwent WPIX

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013738156 **Image available**

WPI Acc No: 2001-222386/200123

Synthetic resin made bag for pocket of beach ball, is formed by heat welding surfaces of olefin type resin sheet to form hollow cylinders, at opening circumferences

Patent Assignee: OTANI KK (OTAN-N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 2001031109	A	20010206	JP 99209997	A	19990723	200123 B

Priority Applications (No Type Date): JP 99209997 A 19990723

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 2001031109	A		16	B65D-030/10	

Abstract (Basic): JP 2001031109 A

NOVELTY - The synthetic resin made bag (1) has a pair of hollow cylinders (2,3) formed with olefin type resin sheets (5-8). The resin sheets are surface treated to print to one surfaces (5a,6a,7a,8a) which faces the front side. The other surfaces (7b,8b) are heat welded to form a hollow **structure** at opening circumferences (5d,7d).

DETAILED DESCRIPTION - In an another arrangement, a connecting sheet with connection hole is provided for connecting the two hollow cylinders. The connecting sheet is heat welded at opening circumferences. The adjacent surfaces of two sheets are laminated and the opposite surfaces of the two sheets are bent and joined. An INDEPENDENT CLAIM is also included for the manufacturing apparatus of synthetic resin made bag which involves heat welding two sheets of opposite surfaces to form a circumference of one hollow cylinder. The same process is carried out for forming another hollow cylinder. Heat welding is carried out at the opening circumference of both hollow cylinders. In an alternate method, the plug is provided at the opening and connection sheet formed with olefin type resin sheet is connected between the two resin sheets.

USE - For **pocket** of beach ball, air vinyl doll and vinyl manufacturing notebook cover.

ADVANTAGE - Avoids generation of toxic substances such as dioxin during incineration, as the synthetic resin made bag is formed with olefin type resin sheet. Enhances printing character, picture and pattern, as the outer surface is treated and hence manufacturing decorative bag is easy.

DESCRIPTION OF DRAWING(S) - The figure shows the cross-sectional view of synthetic resin made bag.

Bag (1)

Hollow cylinders (2,3)

Resin sheets (5-8)

Surfaces (5d,7d) Circumferences (5a,6a,7a,8a,7b,8b)

pp; 16 DwgNo 2/13

Derwent Class: A95; P36; P72; P76; Q32

International Patent Class (Main): B65D-030/10

International Patent Class (Additional): A63B-041/00; **A63H-003/06** ;
A63H-009/00; B29C-065/02; B29K-023-00; B29L-031-52; B29L-031-54;
B31B-001/64; B42D-003/18

16/7,K/3 (Item 3 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

013432002 **Image available**

WPI Acc No: 2000-603945/200058

Design and manufacture of entertainment balloons allows freedom of assembly in shape and size

Patent Assignee: KOMABA K (KOMA-I)

Inventor: KOMABA K

Number of Countries: 029 Number of Patents: 005

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1044708	A2	20001018	EP 2000107184	A	20000412	200058 B
AU 200028876	A	20001019	AU 200028876	A	20000414	200058
CA 2303681	A1	20001015	CA 2303681	A	20000403	200061
JP 2000356965	A	20001226	JP 200033531	A	20000210	200105
US 6276984	B1	20010821	US 2000504148	A	20000215	200150

Priority Applications (No Type Date): JP 99108642 A 19990415

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 1044708	A2	E	10	A63H-027/10	
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Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI

AU 200028876	A			A63H-027/10	
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CA 2303681	A1	E		A63H-027/10	
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JP 2000356965	A		6	G09F-019/00	
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US 6276984	B1			A63H-003/06	
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Abstract (Basic): EP 1044708 A2

NOVELTY - Front (2a) and rear (2b) panels are rectangular and are melt-bonded together. On at least one of the surfaces of the protrusions (3) and on the surfaces of the body (2) are stuck **strips** of paper-protected double-sided adhesive tape. A conventional non-return gas input valve (5) is incorporated.

USE - For shows and entertainments.

ADVANTAGE - Balloons can be displayed freely in shape and size without any **frame** members.

DESCRIPTION OF DRAWING(S) - The diagram shows a perspective view of a construction of a balloon.

pp; 10 DwgNo 3/9

Derwent Class: P36; P85

International Patent Class (Main): **A63H-003/06** ; A63H-027/10; G09F-019/00

16/7,K/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

012543571 **Image available**

WPI Acc No: 1999-349677/199930

Self inflatable enclosure with discrete chambers, for use as e.g. life raft, inflatable toy, or novelty item

Patent Assignee: LIEBERMANN R B (LIEB-I)

Inventor: LIEBERMANN R B

Number of Countries: 002 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2332882	A	19990707	GB 9821710	A	19981007	199930 B
US 5941752	A	19990824	US 97960785	A	19971030	199941
GB 2332882	B	20011107	GB 9821710	A	19981007	200169

Priority Applications (No Type Date): US 97960785 A 19971030

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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GB 2332882	A		24	B63C-009/18	
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US 5941752	A			A63H-003/06	
------------	---	--	--	-------------	--

GB 2332882	B			B63C-009/18	
------------	---	--	--	-------------	--

Abstract (Basic): GB 2332882 A

NOVELTY - The enclosure (24) has a first reactive component (16) contained within a fracturable first **envelope** (12) which in turn is contained in a second **envelope** (14) having at least one self sealing aperture (40) through it, and containing a second reactive component (20). The second **envelope** is contained is contained within a third **envelope** (26). The first and second components (16,20) are reactable to generate a gas which discharges into the third **envelope** only on the second **envelope** (14) having a predetermined internal pressure.

DETAILED DESCRIPTION - The third **envelope** is made from water and

stretch resistant material. The second **envelope** is made for coextruded film having first and second polymers. Preferably the first is nylon, and the second is low density polyethylene, or the first is high density polyethylene, and the second is low density polyethylene. The first and second reactive components are an acid, and base, preferably lemon juice and citric acid, and sodium bicarbonate respectively, or citric acid and sodium bicarbonate. A super absorbent material is dispersed through one of the first and second reactive components, to form a gel.

USE - As life raft, inflatable toy, of novelty item such as balloon.

ADVANTAGE - For inflatable lift raft, inflatable toy, or novelty item such as a device attached to a fishing rod, which inflates if the rod is dropped into the water.

DESCRIPTION OF DRAWING(S) - The figure shows a cross section view.

first **envelope** (12)
second **envelope** (14)
first reactive component (16)
second reactive component (20)
third **envelope** (26)
self sealing aperture (40)
pp; 24 DwgNo 4/4

Derwent Class: A17; A23; A86; A95; K04; P36; Q24

International Patent Class (Main): **A63H-003/06** ; B63C-009/18

International Patent Class (Additional): B01J-007/02; B63B-009/125;
B63B-022/22

16/7,K/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

012124627 **Image available**

WPI Acc No: 1998-541539/199846

Collapsible stuffed toy figure - has balloons which are inflated in head and torso so as to impart three dimensional form.

Patent Assignee: SPECTOR D (SPEC-I)

Inventor: SPECTOR D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5813896	A	19980929	US 97840655	A	19970425	199846 B

Priority Applications (No Type Date): US 97840655 A 19970425

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5813896	A		5	A63H-003/06	

Abstract (Basic): US 5813896 A

The toy figure comprises a fabric **casing** which is shaped such that it defines a head (10), torso (12), neck, arms (15,16) and legs. A compressible stuffing is provided to impart a three dimensional form. A first balloon is inflated in the head.

The head has a slit to receive the balloon in the deflated state. A second balloon is inflated in the slit form in torso. The figure is collapsible so that it becomes compact during packaging.

ADVANTAGE - Reduces occupancy space. Offers compact **structure**.

Dwg.1/4

Derwent Class: P36

International Patent Class (Main): **A63H-003/06**

16/7,K/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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007043408

WPI Acc No: 1987-043405/198706

Toy with envelope enclosing moving mechanism - has rigid tube to hold helically grooved rod in axially movable manner while rotating

Patent Assignee: WANG C C (WANG-I)

Inventor: WANG C C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4639232	A	19870127	US 85707476	A	19850301	198706 B

Priority Applications (No Type Date): US 85707476 A 19850301

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 4639232	A	8		

Abstract (Basic): US 4639232 A

The toy comprises an **envelope** having a flexible material wall, and a sheet extending across an interior portion of the **envelope** and being connected to an inner side of the wall. A rigid **tubular** member is centered through the sheet and has an outer periphery. A transverse plate having a central opening and a cam edge around the opening is fixed at a top end of the tubular member.

A moving **rod** is mounted in the tubular member and passes through the central opening so as to be axially movable through it. The moving **rod** has an outer periphery, a longitudinal axis, a top end, and a bottom end. Helical grooves of predetermined length are provided on the outer periphery of the moving **rod**, so as to engage with the cam edge around the central opening in the transverse plate.

3/8

Derwent Class: P36

International Patent Class (Additional): A63H-003/06

16/7,K/9 (Item 1 from file: 371)
000903419 **Image present**

Titre: Structure pour un objet gonflable emettant lumiere et son.

Deposant: WANG JANG CHANG

Nom et Adresse du Deposant: WANG JANG-CHANG- Deposant - 4F, NO. 23, LANE 119, HULIN STREET TAIPEI, TAIWAN CHINE (CN)

Nom Inventeurs: WANG JANG-CHANG - 4F, NO. 23, LANE 119, HULIN STREET TAIPEI, TAIWAN CHINE (CN)

Nom Mandataire: CABINET CLAUDE RODHAIN SA

Nature de Publication: Certificat d'utilite

Information de Brevet et Priorites (Pays, Numero, Date):

Numero Publication: FR 2713504 - 19950616

Numero Depot: FR 9315098 - 19931215

Priorites: FR 9315098 - 19931215

Resume:

Structure d'objet gonflable (1) emetteur de lumiere et de son, constituee d'une enveloppe inferieure creuse (2) pour fixation a la membrane exterieure de l'objet gonflable par un scellement prechauffe, et d'une enceinte (3) en forme de boite pouvant etre inseree dans l'enveloppe inferieure; sur le cote inferieur de l'enveloppe une ouverture debouche dans l'interieur de l'objet gonflable pour l'insertion

d'un bouchon muni de fils conducteurs, le bouchon pouvant se monter etroitement dans ladite ouverture afin de conserver la forme de l'objet gonfle, tout en permettant les liaisons electriques entre l'interieur de l'enceinte et une lumiere decorative situee a l'interieur de l'objet ainsi qu'entre une alimentation et un ensemble emetteur de son se trouvant dans l'enceinte, l'enceinte pouvant etre facilement inseree dans l'enveloppe inferieure, ce qui permet a l'objet gonfle de presenter les fonctions d'emission d'une lumiere et d'un son.

Classification Internationale (Principale): **A63H-003/06**

Classification Internationale: A63H-003/28; A63H-003/36; F21V-033/00

Descripteurs Francais: JOUET GONFLABLE; DECORATION; EMISSION; LUMIERE; SON; ENVELOPPE; BOITIER; COMMUTATEUR; MOUVEMENT

Descripteurs Anglais: INFLATABLE TOY; ORNAMENT; EMITTER; LIGHT; SOUND; ENVELOPE ; CASING ; SWITCH; MOVEMENT

22/7,K/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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009224379 **Image available**

WPI Acc No: 1992-351801/199243

Airships with supporting framework - which consists of series of transverse frames and longitudinals located in between

Patent Assignee: LUFTSCHIFFBAU ZEPPELIN GMBH (LUFT-N)

Inventor: HAGENLOCHER K; HAGENLOHER K

Number of Countries: 007 Number of Patents: 011

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2254833	A	19921021	GB 928265	A	19920414	199243 B
DE 4112621	A	19921022	DE 4112621	A	19910418	199244
FR 2675462	A1	19921023	FR 923172	A	19920317	199251
ZA 9202515	A	19921230	ZA 922515	A	19920407	199307
DE 4233768	A1	19931014	DE 4233768	A	19921007	199342 N
US 5285986	A	19940215	US 92869645	A	19920416	199407
RU 2003596	C1	19931130	SU 5011253	A	19920408	199411
DE 4112621	C2	19940623	DE 4112621	A	19910418	199423
GB 2254833	B	19940928	GB 928265	A	19920414	199436
IT 1259545	B	19960320	IT 92TO346	A	19920416	199639
DE 4233768	C2	20000608	DE 4233768	A	19921007	200032 N

Priority Applications (No Type Date): DE 4112621 A 19910418; DE 4233768 A 19921007

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
GB 2254833	A	31	B64B-001/06		
DE 4112621	A	23	B64B-001/14		
FR 2675462	A1		B64B-001/14		
ZA 9202515	A	32	B64B-000/00		
DE 4233768	A1	12	B64B-001/58		Add to patent DE 4112621
US 5285986	A	15	B64B-001/06		
RU 2003596	C1	11	B64B-001/14		
DE 4112621	C2	13	B64B-001/14		Add in patent DE 4233768
GB 2254833	B		B64B-001/06		
IT 1259545	B		B64B-000/00		
DE 4233768	C2		B64B-001/58		Add to patent DE 4112621

Abstract (Basic): GB 2254833 A

The **airship** with a supporting framework comprises a number of transverse frames and a number of longitudinals disposed between the

frames, and with at least one gas space for buoyancy gas. The transverse frames comprise in each case three elongate members disposed in the form of an isosceles or equilateral triangle with an apex of the triangle pointing upwards. The corners of the triangle form nodal points for connecting the longitudinals to the elongate members. The supporting **framework** is covered by an **envelope** comprising at least three longitudinally extending **envelope** segments which are secured, along longitudinal edges of it, to one another and to the longitudinals of the supporting **framework**. The **envelope** delimits the outward extent of the gas space of the **airship** and defining the shape of the **airship**.

A front part and a rear part of the airship contain respective inflatable and deflatable air chambers for control purposes which are located on a base region of the framework. In the inflated condition they occupy the triangular cross-section of the framework in the front and rear parts.

ADVANTAGE - Less noise and vibration.

Dwg.1/9

Abstract (Equivalent): GB 2254833 B

An airship with a supporting framework comprising a plurality of transverse frames and a plurality of longitudinals disposed between the frames, and with at least one gas space for buoyancy gas, wherein the transverse frames comprise in each case three elongate members disposed in the form of an isosceles or equilateral triangle with an apex of the triangle pointing upwards, and with the corners of the triangle forming nodal points for connecting the longitudinals to the elongate members, the supporting **framework** is covered by an **envelope** comprising at least three longitudinally extending **envelope** segments which are secured, along longitudinal edges thereof, to one another and to the longitudinals of the supporting **framework**, the **envelope** delimiting the outward extent of the gas space of the **airship** and defining the shape of the **airship**, and a front part of a rear part of the **airship** contain respective inflatable and deflatable air chambers for control purposes which are located on a base region of the framework and, in an inflated condition, occupy the triangular cross-section of the framework in the said front and rear parts.

Dwg.1

Abstract (Equivalent): US 5285986 A

An airship has a carrier frame with triangular cross-ribs arranged so that an apex faces upwardly and a base faces downwardly. This longitudinal beams at the corners of the triangles interconnect the cross-ribs. The carrier **frame** is enclosed by an **envelope** including at least three skin segments joined to each other along seams coinciding with the longitudinal frame beams.

Each skin segment extends entirely from the bow to the stern and may include several **strips**. At least two steering air chambers are provided, one near the bow, the other near the stern for trimming purposes.

ADVANTAGE - The seams, or at least one of the seams, is so constructed that it is readily openable and closable for providing access to the interior of the airship.

Dwg.1/9

Derwent Class: Q25

International Patent Class (Main): B64B-000/00; B64B-001/06; B64B-001/14; B64B-001/58

International Patent Class (Additional): B64B-001/08; B64B-001/18

25/26, TI/20 (Item 20 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
010342597
WPI Acc No: 1995-244682/199532
Gondola for hot air balloon - has weft of three-dimensional fabric made from single threads whilst horizontal layers have complex threads

25/26, TI/22 (Item 22 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
010034174
WPI Acc No: 1994-301887/199437
Semi-rigid airship using hydrogen to provide lift - with hydrogen engine exhaust gas disposed between envelope and cell supported by keel, powered by solar cell during daytime

25/26, TI/24 (Item 24 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
009836091
WPI Acc No: 1994-115947/199414
Cupping glass - with resilient balloon fixed to hollow cylindrical body, and heat conductor in form of rod in piston channel

25/26, TI/32 (Item 32 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
007316522
WPI Acc No: 1987-313529/198744
Bicycle noise making balloon - has straps to secure balloon to frame via hook and loop fastening material

25/26, TI/33 (Item 33 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
004264343
WPI Acc No: 1985-091221/198515
Pneumatic centring - has pneumatic fastening balloons on outer surface of casing, each with air valve at apex

25/26, TI/37 (Item 37 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
002307365
WPI Acc No: 1980-B3797C/198006
Distress signal balloon appts. - operated by impact to produce gas and raise balloon on tether to indicate remote accident site

25/7, K/1 (Item 1 from file: 350)
DIALOG(R) File 350: Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
015620233 **Image available**
WPI Acc No: 2003-682404/200365
Airship has envelope containing variable volume chambers filled with

lighter - than - air **gas and adjustable by actuator to form ballast**

Patent Assignee: PATERAS PESCARA DE CASTELLUCCIO C (DCAS-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2836449	A1	20030829	FR 20022412	A	20020226	200365 B

Priority Applications (No Type Date): FR 20022412 A 20020226

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2836449	A1	17	B64B-001/58		

Abstract (Basic): FR 2836449 A1

NOVELTY - The **airship** has a rigid **frame** (2) and an **envelope** (3), a suspended nacelle (4), and a series of inner chambers (5) containing a **lighter - than - air** gas. The chambers have a variable inner volume, controlled by the deployment of an actuator (6) operated by a generator and a command and control unit (8). Each ballast chamber has a wall in the form of a basically cylindrical bellows and two end walls, one of which is movable and connected to the actuator and an inner power cylinder. The generator is in the form of a free piston engine.

USE - Airship use e.g. for agricultural work such as crop spraying.

ADVANTAGE - The buoyancy of the airship can be adjusted without loss of ballast or gas.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section of the airship in side view.

Rigid frame (2)

Envelope (3)

Nacelle (4)

Variable-volume chambers (5)

Actuator (6)

Command and control unit (8)

pp; 17 DwgNo 1/3

Derwent Class: Q25

International Patent Class (Main): B64B-001/58

International Patent Class (Additional): B64B-001/06

25/7,K/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

014931542 **Image available**

WPI Acc No: 2002-752251/200282

Energy-absorbing protective envelope for airship or balloon has energy-absorbing material webs extending between pressurised hoses forming pneumatic support structure

Patent Assignee: DORNIER GMBH (DOSY)

Inventor: FRITZSCHE A; KOCH H

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 10149036	C1	20021205	DE 1049036	A	20011005	200282 B

Priority Applications (No Type Date): DE 1049036 A 20011005

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
DE 10149036	C1	8	B64B-001/14		

Abstract (Basic): DE 10149036 C1

NOVELTY - The protective envelope has one or more energy-absorbing

material webs extending between a number of relatively spaced individual pressurised hoses (22), acting as a pneumatic support **structure** for the protective **envelope**. The number of material webs and the diameter of the pressurised hoses are matched to the required protection level of the protective envelope for the enclosed **balloon** body (20) or **airship**.

USE - The energy-absorbing protective envelope is used for enclosing a balloon or airship for preventing it being shot down.

ADVANTAGE - The envelope provides effective protection against low calibre and splitter weapons.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic representation of a balloon enclosed by an energy-absorbing protective envelope.

Balloon body (20)

Pressurised hoses (22)

pp; 8 DwgNo 4/5

Derwent Class: Q25

International Patent Class (Main): B64B-001/14

25/7,K/7 (Item 7 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014587441 **Image available**

WPI Acc No: 2002-408145/200244

Airship with dynamic structure comprises openwork structure and protection casing permeable to wind, rain and ice and directional propellers allowing propulsion in any direction

Patent Assignee: DUBOIS J (DUBO-I)

Inventor: DUBOIS J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2816582	A1	20020517	FR 200014585	A	20001114	200244 B

Priority Applications (No Type Date): FR 200014585 A 20001114

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
FR 2816582	A1	14	B64B-001/14	

Abstract (Basic): FR 2816582 A1

NOVELTY - The **airship** comprises an overall **structure** (1) able to transport passengers (2) and freight (3) located in the nacelles (4). The **structure** comprises an openwork **frame** (5) permeable to winds, rain, snow and sand. The protection **casing** (6) is permeable to wind and rain. The directional lift (7) is permeable to wind and rain and enables, even in bad weather, its lift, navigation and its parking. There are directional propellers (8) allowing propulsion in any direction. Navigation means (23) allow different local climatic conditions to be identified.

USE - Airship with dynamic structure.

DESCRIPTION OF DRAWING(S) - Drawing shows view of the airship structure.

structure (1)

passengers (2)

freight (3)

nacelle (4)

protection casing (6)

directional lift (7)

propellers ((8)
navigation means (23)
pp; 14 DwgNo 1/5
Derwent Class: Q25
International Patent Class (Main): B64B-001/14
International Patent Class (Additional): B64B-001/58

25/7,K/8 (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
014228720 **Image available**
WPI Acc No: 2002-049418/200206
Airship balloon rigidified by helium tanks comprises outer flexible casing supported by rigid structure comprising hollow toroids which serve as helium tanks
Patent Assignee: INST FRANCAIS DU PETROLE (INSF); SENEPART M (SENE-I)
Inventor: SENEPART M
Number of Countries: 097 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200185540	A1	20011115	WO 2001FR1421	A	20010511	200206 B
FR 2808769	A1	20011116	FR 20006179	A	20000512	200206
AU 200160396	A	20011120	AU 200160396	A	20010511	200219
EP 1280698	A1	20030205	EP 2001934085	A	20010511	200310
			WO 2001FR1421	A	20010511	
US 20030141410	A1	20030731	WO 2001FR1421	A	20010511	200354
			US 2002276021	A	20021112	

Priority Applications (No Type Date): FR 20006179 A 20000512

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200185540 A1 F 14 B64B-001/08

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GR IE IT
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

FR 2808769 A1 B64B-001/58

AU 200160396 A B64B-001/08 Based on patent WO 200185540

EP 1280698 A1 F B64B-001/08 Based on patent WO 200185540

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
LI LT LU LV MC MK NL PT RO SE SI TR

US 20030141410 A1 B64B-001/02

Abstract (Basic): WO 200185540 A1

NOVELTY - The **balloon** (1) consists of an outer flexible **casing** (3) supported by a **rigid structure**. This **structure** comprises several hollow toroids (4) whose internal volume serves as a tank for pressurized helium.

USE - Airship balloon rigidified by helium tanks.

ADVANTAGE - A gain of weight and reduced size of basket are obtained.

DESCRIPTION OF DRAWING(S) - Drawing shows view of the airship balloon.

balloon (1)
flexible casing (3)
hollow toroids (4)

pp; 14 DwgNo 1/5
Derwent Class: Q25
International Patent Class (Main): B64B-001/02; B64B-001/08; B64B-001/58
International Patent Class (Additional): B64B-001/06; B64B-001/62

25/7,K/9 (Item 9 from file: 350)

DIALOG(R) File 350:Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
014072782 **Image available**
WPI Acc No: 2001-556995/200162

Payload suspension system for airship has loop tabs attached to airship envelope for fixing frame used in attaching predetermined payload

Patent Assignee: AIRSHIP MANAGEMENT SERVICES INC (AIRS-N)

Inventor: BEWLEY J; HANKINSON J; HANKINSON R; SPYROU G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6290176	B1	20010918	US 98103656	A	19981009	200162 B
			US 99414635	A	19991008	

Priority Applications (No Type Date): US 98103656 P 19981009; US 99414635 A 19991008

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6290176	B1	12	B64B-001/02	Provisional application	US 98103656

Abstract (Basic): US 6290176 B1

NOVELTY - A cable system has two upper load curtains (12) and a lower load curtain (14) which are fixed to the internal surface (16) of an airship envelope (15) and connected by at least two cables (10). Loop tabs are attached to the airship envelope. A frame for attaching a payload is fixed to the loop tab.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

- (a) a payload suspending method;
- (b) and a payload suspension.

USE - Applicable for suspending payload-carrying gondola from airship.

ADVANTAGE - Eliminates possibility of gas leakages of airship since cables between two sets of load curtains do not breach airship envelope. Ensures gas leakage protection and structural support of airship due to provision of internal and external patches reinforcing slits. Simplifies rigging of car to envelope since cable tension device becomes unnecessary during assembly process.

DESCRIPTION OF DRAWING(S) - The figure shows the cross-sectional side view of airship with payload suspension system.

Cables (10)
Upper load curtains (12)
Lower load curtain (14)
Airship envelope (15)
Envelope internal surface (16)

pp; 12 DwgNo 1a/4

Derwent Class: Q25
International Patent Class (Main): B64B-001/02
International Patent Class (Additional): B64B-001/06

25/7,K/12 (Item 12 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

013402010 **Image available**

WPI Acc No: 2000-573948/200054

Multiple cell aerostat balloon has cells arranged rotationally symmetrically around central envelope with rigid frames at top and bottom

Patent Assignee: INTERACTIVE STAR (INTE-N); REGIPA & PARTNERS DEV (REGI-N);
REGIPA & PARTNERS DEV SARL (REGI-N)

Inventor: REGIPA O; REGIPA R

Number of Countries: 022 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
FR 2790441	A1	20000908	FR 992572	A	19990302	200054 B
WO 200228707	A1	20020411	WO 2000FR2472	A	20001003	200231 N
AU 200074254	A	20020415	AU 200074254	A	20001003	200254 N
			WO 2000FR2472	A	20001003	

Priority Applications (No Type Date): FR 992572 A 19990302; WO 2000FR2472 A 20001003; AU 200074254 A 20001003

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
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FR 2790441	A1	41	B64B-001/58	
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WO 200228707	A1 F		B64B-001/58	
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Designated States (National): AU CA JP US

Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU
MC NL PT SE

AU 200074254 A B64B-001/58 Based on patent WO 200228707

Abstract (Basic): FR 2790441 A1

NOVELTY - The multiple cell **balloon aerostat** has the cells (102) arranged rotationally symmetrically around a vertical axis defined by an **envelope** with upper and lower poles to which the **envelope** is attached. The upper and lower poles are connected by cables (103) inside the balloon. A lower connecting **structure** (114) has a rigid beam (116) to form a **frame** and the upper connecting **structure** is similar.

USE - For an air balloon

ADVANTAGE - Allows high aerodynamic stability in turbulence

DESCRIPTION OF DRAWING(S) - Drawing shows side view of balloon assembly

Cells (102)

Connector structures (114,116)

pp; 41 DwgNo 1/11

Derwent Class: Q25

International Patent Class (Main): B64B-001/58

International Patent Class (Additional): B64B-001/00

25/7,K/18 (Item 18 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

010441632 **Image available**

WPI Acc No: 1995-342951/199544

Jet-propelled dirigible - has cylindrical envelope enclosed in rigid diamond-shaped frame, one jet-propelled landing, and four horizontal thrust engines

Patent Assignee: KEROV V G (KERO-I)

Inventor: KEROV V G

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
RU 2031811	C1	19950327	SU 5018872	A	19911226	199544 B

Priority Applications (No Type Date): SU 5018872 A 19911226

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

RU 2031811 C1 3 B64B-001/08

Abstract (Basic): RU 2031811 C

This **dirigible** has a landing engine (4) and four horizontal thrust jet engines (5). These are mounted on the corners of the envelope's (1) diamond-shaped **frame** (2). The **envelope** has a plate (3) fixed on it. The landing engine (4) is fixed on the plate. The four horizontal thrust engines' nozzles are directed in different directions from the centre.

The aircraft fuselage (6) is rigidly connected to the plate (3) and to the gondola (7).

ADVANTAGE - Improved performance, including improved manoeuvrability. Bul. 9/27.3.95

Dwg.1/3

Derwent Class: Q25

International Patent Class (Main): B64B-001/08

International Patent Class (Additional): B64B-001/36

25/7,K/21 (Item 21 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

010072440 **Image available**

WPI Acc No: 1994-340153/199442

Dirigible for illuminating surface at night - has shell with transparent bottom and light sources situated in inside of envelope in frames attached to envelope

Patent Assignee: TARANTSEV A A (TARA-I)

Inventor: TARANTSEV A A

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
SU 1821407	A1	19930615	SU 4902685	A	19910116	199442 B

Priority Applications (No Type Date): SU 4902685 A 19910116

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

SU 1821407 A1 2 B64B-001/00

Abstract (Basic): SU 1821407 A

This illuminating dirigible has an **envelope** (1) filled with a carrying gas. Also, a load suspension (2), a cable (4) and a light source (3). The **envelope's** lower part has transparent windows (7). Frames (5) holding the light source has turning drives. One frame with a light source (3) can be joined to the **envelope's** (1) upper section by cables (6). Alternately, this **frame** can be attached to a transparent window's carcass by post.

ADVANTAGE - Better load-carrying capability and improved lighting.

Bul. 22/15.6.93

Dwg.1/3

Derwent Class: Q25

International Patent Class (Main): B64B-001/00

25/7,K/23 (Item 23 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

009974981 **Image available**

WPI Acc No: 1994-242694/199430

Balloon or airship structure - includes inner and outer envelopes
integrally joined to expand together as one double envelope structure

Patent Assignee: STOKLOSINSKI M (STOK-I); STOKLOSINSKI R (STOK-I)

Inventor: STOKLOSINKI M; STOKLOSINKI R; STOKLOSINSKI M; STOKLOSINSKI R

Number of Countries: 001 Number of Patents: 002

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 2275036	A	19940817	GB 933066	A	19930216	199430 B
GB 2275036	B	19970625	GB 933066	A	19930216	199728

Priority Applications (No Type Date): GB 933066 A 19930216

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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GB 2275036	A		7	B64B-001/58	
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GB 2275036	B			B64B-001/58	
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Abstract (Basic): GB 2275036 A

The **balloon/airship** embodies a double **envelope** consisting of the inner **envelope** (2) enclosed by the outer **envelope** (1). Both the **envelopes** form an integrally functioning double **envelope**, containing an enclosed gas/air space or passages (6) into which gas/air is pumped under a small pressure.

This in turn acts on the outer **envelope** (1) which expands and displaces the surrounding air and simultaneously is prevented from entering the created vacuum in the space (7) inside the inner **envelope** (2). This expands together as one body with the outer **envelope** (1).

Dwg.2/6

Abstract (Equivalent): GB 2275036 B

A balloon/airship embodying two envelopes which are so constructed that one envelope, the inner one, is enclosed by another envelope, the outer one, both the envelopes forming an integrally functioning double envelope of the balloon/airship and having an enclosed gas/air space within and between them into which gas/air is admitted in order to inflate the balloon/airship and by doing so to create a vacuum inside the double envelope.

Dwg.2

Derwent Class: Q25

International Patent Class (Main): B64B-001/58

25/7,K/31 (Item 31 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

007658284 **Image available**

WPI Acc No: 1988-292216/198841

Lighter-than-air craft - has inner compartments filled with helium or hydrogen, with overall lift force regulated by hot air supply to inner envelope

Patent Assignee: MCCAMPBELL B L (MCCA-I)

Inventor: MCCAMPBELL B L

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4773617	A	19880927	US 8722069	A	19870305	198841 B

Priority Applications (No Type Date): US 8722069 A 19870305

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 4773617	A		4		
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Abstract (Basic): US 4773617 A

The **lighter - than - air** craft comprises an outer gas-tight **envelope** having a first longitudinal axis and a smaller inner **envelope** having a second longitudinal axis below the first longitudinal axis and positioned within the outer envelope to form a gas-tight **pocket** between. A rigid **structure** supports the inner and outer **envelopes**. Gas tight bulkheads extend parallel to the first longitudinal axis and are positioned in the gas tight pocket to divide the pocket into separate longitudinal compartments.

Some of the separate longitudinal compartments are filled with helium and the remainder with hydrogen. The inner **envelope** is filled with air. The air in the inner envelope is heated to vary the lift of the air craft. A shroud forms a separate compartment between the inner envelope and some of the longitudinal compartments.

USE - Airship utilising multiple envelopes to allow different lifting gases to be used.

1/2

Derwent Class: Q25

International Patent Class (Additional): B64B-001/60

25/7,K/38 (Item 38 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

001961377

WPI Acc No: 1978-K0651A/197846

Monocoque type rigid dirigible - has series of rings of gas-tight cells in place of framework and held by envelope pressure or bonding

Patent Assignee: GROGER E (GROG-I)

Inventor: GROGER E

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 2719893	A	19781109				197846 B

Priority Applications (No Type Date): DE 2719893 A 19770504

Abstract (Basic): DE 2719893 A

The monocoque type rigid **dirigible** has the conventional **framework** replaced by a series of rings with their outer surfaces so configured that they produce the **dirigible's** outline when assembled. Each ring is made up of a set of segmental hollow cells, of formed plastic and with gastight walls. The whole assembly is enclosed in an **envelope** which applies some compressive stress.

Alternatively, the cells may be permanently or detachably bonded together. The cells have filling and venting connections in the inside surfaces. The space inside the rings is freely available for stowage of fuel, cargo, etc.

Derwent Class: Q25

International Patent Class (Additional): B64B-001/08

25/7,K/40 (Item 40 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

001720437

WPI Acc No: 1977-F6928Y/197727

Aerostat of adjustable buoyancy - has impermeable flexible envelope stretched over folding frame to define variable volume vacuum providing buoyancy

Patent Assignee: COOKE W D (COOK-I)

Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4032086	A	19770628				197727 B

Priority Applications (No Type Date): US 75624045 A 19751020

Abstract (Basic): US 4032086 A

Aerostats (1) or aquastat comprises a sealed **envelope** of flexible material impervious to the passage of gas which is mounted on a flexible frame (4) forming a permanent part of the device. The **frame** can be caused to expand the **envelope** after it has been wholly or very substantially excavated of internal gas, thus setting up a (partial) vacuum in the **envelope**. In the case of a partial vacuum, the gas at reduced pressure may be hydrogen or helium.

The lift or buoyancy of the device may be controlled when in use by altering the volume of the **envelope** by adjusting the shape of the **frame** by acting mechanism carried by the device.

Derwent Class: Q25

International Patent Class (Additional): B64B-001/58

25/7,K/42 (Item 42 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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001520540

WPI Acc No: 1976-J3475X/197638

Framework mounted aerostat - has flexible sealed envelope whose internal pressure is reduced by being expanded mechanically

Patent Assignee: COOKE W D (COOK-I)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
GB 1449468	A	19760915				197638 B

Priority Applications (No Type Date): GB 7329686 A 19730622; GB 7316540 A 19730406

Abstract (Basic): GB 1449468 A

The **aerostat** or aquastat includes a sealed **envelope** (1) of gas-impervious flexible material mounted on a **frame** (4) which is capable of distending the **envelope** from a condition in which it encloses a comparatively small volume to a condition in which it encloses a comparatively large volume. The **envelope** contains substantially no gas or such a quantity of gas that, when the **envelope** encloses the large volume, the gas is at a pressure reduced by distention of the **envelope** by the **frame** and sufficiently low to render the **aerostat** or aquastat buoyant relative to the ambient air or water pressure.

Derwent Class: Q25

International Patent Class (Additional): B64B-001/58

26/26,TI/4 (Item 4 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

015230746

WPI Acc No: 2003-291670/200329

Decorative standard lamp, uses inflatable inner balloon as frame

26/26,TI/8 (Item 8 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.
011219067

WPI Acc No: 1997-196992/199718

Drug storage structure in oceanic information collection appts - has
container comprising balloon and buoy body which suspends oceanic sensor

26/26, TI/13 (Item 13 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.
009494794

WPI Acc No: 1993-188330/199323

Illuminated toy balloon providing low heat generation - includes light stick
over which is positioned translucent envelope, with tubing extending to
balloon neck

26/26, TI/15 (Item 15 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.
009472346

WPI Acc No: 1993-165886/199320

Over land motor vehicle with aerostatic balloon load relief - has mechanism
for twisting flexible balloon envelope into low buoyancy braid

26/26, TI/18 (Item 18 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.
004228342

WPI Acc No: 1985-055221/198509

Pneumatic vehicle suspension spring - has sleeve round balloon and auxiliary
balloon attached to sleeve bottom with cap and rod with stop

26/26, TI/20 (Item 20 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.
003721688

WPI Acc No: 1983-717880/198330

Hot air airship with inflatable envelope - is driven by IC engines
whose exhaust heats air to obtain lift, when blown into envelope

26/26, TI/22 (Item 22 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.
001704431

WPI Acc No: 1977-E0918Y/197720

Double envelope construction airship - has separate hot air and light
gas volumes with heater delivering air to distributor

26/26, TI/25 (Item 1 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.
07657481

ILLUMINATION BALLOON

26/26, TI/26 (Item 2 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

06820601

SOFT HIGH ALTITUDE **AIRSHIP** AND OPERATING AND CONTROLLING METHOD THEREFOR

26/26, TI/27 (Item 3 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

06695158

SUPER-PRESSURE TYPE HIGH ALTITUDE **AIRSHIP**

26/26, TI/29 (Item 5 from file: 347)

DIALOG(R) File 347: JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

01425697

THERMAL **AIRSHIP** OR THERMAL **BALLOON** OF **ENVELOPE** OF TWO-LAYER CLOTH
STRUCTURE OF DIFFERENT PHYSICAL PROPERTY

26/7, K/11 (Item 11 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 THOMSON DERWENT. All rts. reserv.

010285428 **Image available**

WPI Acc No: 1995-186687/199525

Toy balloon has internal stabilising holder - for insertion of
inflating and/or holding rod

Patent Assignee: HERTEL R (HERT-I)

Inventor: HERTEL R

Number of Countries: 019 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4338809	A1	19950518	DE 4338809	A	19931112	199525 B
WO 9513121	A1	19950518	WO 94EP3681	A	19941109	199525
AU 9481063	A	19950529	AU 9481063	A	19941109	199537

Priority Applications (No Type Date): DE 4338809 A 19931112

Cited Patents: EP 356013; US 4721491; US 5336123; WO 9317768

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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DE 4338809	A1		11	B64B-001/40	
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WO 9513121	A1 G		22	A63H-027/10	
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Designated States (National): AU JP US

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LU MC NL
PT SE

AU 9481063 A A63H-027/10 Based on patent WO 9513121

Abstract (Basic): DE 4338809 A

A (Mylar film) **balloon** has an internal fixed stabilising holder, which is formed of two or more overlying pref. welded foils, and which has a **channel** pref. formed by weld seams and with an abutment at its end, an inflating and/or holding **rod** being inserted in the **channel** by a limited amount such that, on direct or indirect contact of the rod with the interior wall of the **balloon**, toppling of the **balloon** is restricted or completely prevented.

ADVANTAGE - The design eliminates problems of expensive and laborious mounting on a rod, loss of decorative appearance and unnecessary film material costs, packaging costs and postage costs.

Dwg. 4/8

Derwent Class: A86; P36; Q25

International Patent Class (Main): B64B-001/40

International Patent Class (Additional): A63H-027/10; B64B-001/58

26/7,K/17 (Item 17 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2004 THOMSON DERWENT. All rts. reserv.
008873115 **Image available**
WPI Acc No: 1992-000386/199201

Airship supporting frame structure - has girders forming
equilateral-triangular cross-members and diagonal bracing struts
Patent Assignee: LUFTSCHIFFBAU ZEPPELIN GMBH (LUFT-N); LUFTSCHIFF ZEPPELIN
(ZEPP-N); LUFTSCHIFFBAU ZEPPE (ZEPP-N)

Inventor: HAGENLOCHE K; WINDISCHBA F; HAGENLOCHER K; WINDISCHBAUER F

Number of Countries: 009 Number of Patents: 009

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 4018749	A	19911219	DE 4018749	A	19900612	199201 B
GB 2245241	A	19920102	GB 9111237	A	19910524	199201
FR 2662995	A	19911213				199209
US 5110070	A	19920505	US 91712269	A	19910607	199221
DE 4018749	C	19920604	DE 4018749	A	19900612	199223
ZA 9107233	A	19920624	ZA 917233	A	19910911	199232 N
GB 2245241	B	19931103	GB 9111237	A	19910524	199344
RU 2005646	C1	19940115	SU 4895680	A	19910611	199431
IT 1249909	B	19950330	IT 91T0443	A	19910611	199536

Priority Applications (No Type Date): DE 4018749 A 19900612; ZA 917233 A 19910911

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5110070	A		18		
DE 4018749	C		17	B64B-001/08	
ZA 9107233	A		31	B64B-000/00	
RU 2005646	C1		9	B64B-001/06	
GB 2245241	B			B64B-001/08	
IT 1249909	B			B64B-000/00	

Abstract (Basic): DE 4018749 A

The **airship** has lengthwise and transverse members forming a supporting **frame** for the gas cells and other modules etc. Each transverse member comprises three girders forming an equilateral triangle, whose corners form nodal points at which the lengthwise members are attached.

The base (S13) of the triangle (S11-13) is at the bottom and horizontal. The square areas enclosed by the cross-member girders and lengthwise members each have two diagonal bracing struts (D). The gas cells (1) are fixed to the lengthwise members inside them, and when full protrude beyond them and the girders and form parts of the airship outer casing. At the bottom they bear loose against the bottom struts, and form the partition (2) for an air chamber (K) in the bottom part of the airship. A separate casing (3) between the bottom lengthwise members (L1,L3) encloses the air chamber on the underside, filling out the airship cross-section.

USE/ADVANTAGE - Simplicity, strength, light weight and high load capacity. (16pp Dwg.No.3/9)

Abstract (Equivalent): DE 4018749 C

The **airship** framework has a series of transverse **frames** (prefixed S) separated by longerons (Lq,L2,Le), supporting a lift-producing gas-**envelope** (1), and other necessary **structures**. Each frame consists of three struts (e.g. S11, S12, S13) arranged in an equilateral triangle

with a horizontal base, below which a **gasbag** (K) is provided. The node-points act as connections with the longerons (L1, L2, L3) and the envelope (1).

Corresponding neighbouring struts (e.g. S12,S22) and connecting longerons (e.g. L2,L3) are arranged as quadrilaterals, and have double diagonal bracing.

USE/ADVANTAGE - Airship construction. The simple framework provides sufficient envelop rigidity at speed, combined with some flexibility to absorb heavy landings

Abstract (Equivalent): GB 2245241 B

An airship comprising a supporting structure having a plurality of transverse frames, and a plurality of longitudinals disposed between the frames, and further comprising at least one gas bag for producing lift, wherein the transverse frames comprise in each case three elongate members disposed in the form of an isosceles triangle with the member forming the base of the triangle being disposed substantially horizontally in a lower part of the said structure, and the vertices of the triangle forming nodal points for connecting the longitudinals to the elongate members.

Dwg.1

Abstract (Equivalent): US 5110070 A

The rigid airship has a carrier frame with triangular cross-ribs interconnected by longitudinal beams, one connected to each corner of the triangle. Thus, prism-type frame sections are formed which are stiffened by diagonal tensioning members (D). The prism of each frame section (A) has two lateral sides and a base side.

Each of the three sides is stiffened with two diagonal tensioning members. Junctions between neighbouring frame sections are formed at the triangle corners. Carrier gas cells, the skin of which forms at least part of the airship skin, are secured in the frame sections. The base of each triangle cross-rib forms the base of the frame. One or more air chambers are formed in the belly of the airship below the base of the frame.

ADVANTAGE - To construct a rigid airship that has an optimally light carrier frame and a high payload as well as strength.

Derwent Class: Q25

International Patent Class (Main): B64B-001/06; B64B-001/08

International Patent Class (Additional): B64B-001/22; B64B-001/24

26/7,K/21 (Item 21 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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001945220

WPI Acc No: 1978-H4488A/197838

Lighter - than - air machine - has thin skin over inner frame of spherical shape and vacuum pump connected to sealable opening

Patent Assignee: WHEELER D C (WHEE-I)

Inventor: WHEELER D C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 4113206	A	19780912				197838 B

Priority Applications (No Type Date): US 77797290 A 19770516

Abstract (Basic): US 4113206 A

Lighter - than - air machine and has thin skin over inner frame of spherical shape and vacuum pump connected to sealable opening.

Lighter - than - air machine includes a thin, pliable air-tight outer envelope in overlying relationship over a light-weight, coarse-opening inner **frame** of a spherelike shape. The **envelope** includes a sealable opening, so that the **envelope** can be at least partially evacuated to render the machine **lighter than air**. A vacuum pump is provided and is connected with the opening for controlling the quantity of air contained in the envelope to determine the amount of lifting energy.

In one form an outer frame is within the **envelope** and surrounding the inner **frame**, and the outer **frame** is composed of a stiff, rigid open-mesh material with the openings in the inner frame being smaller in size than the opening in the outer frame

Derwent Class: Q25

International Patent Class (Additional): B64B-001/40

26/7,K/28 (Item 4 from file: 347)

DIALOG(R) File 347:JAPIO

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03411398 **Image available**

AIRSHIP USING HYDROGEN

PUB. NO.: 03-074298 [JP 3074298 A]

PUBLISHED: March 28, 1991 (19910328)

INVENTOR(s): NAKADA KAZUO

APPLICANT(s): NAKADA KAZUO [000000] (An Individual), JP (Japan)

APPL. NO.: 01-207870 [JP 89207870]

FILED: August 14, 1989 (19890814)

ABSTRACT

PURPOSE: To obtain a safety and inexpensive transportation means by providing such a constitution as injecting an inert gas or engine waste gas from an inlet port into a space between the outer sheath of an airship and a buoyancy bag for receiving hydrogen to scavenge the space part, and exhausting the gas from an exhaust port.

CONSTITUTION: As cooling of engine waste gas nearly to the outside air temperature is required to prevent the dewing in the inside of an outer sheath, the waste gas passed through a third heat exchanger 13 and cooled nearly to the outside air temperature by a heat exchanger 14 is passed through a heat absorbing tube 15 and heated. The warmed waste gas is charged into a space between the outer **sheath** 20 of an **airship** and a buoyancy bag 5 through a waste gas inlet port 16 disposed on the outer **sheath** 20. Then, as the **framework** 21 of the **airship** is situated between the outer sheath 20 and the buoyancy bag 5, the waste gas successively pushing this space part is passed through a check valve 18 disposed on the upper part and exhausted from an exhaust pipe 19. By scavenging this space part from the lower part to the upper part, even if hydrogen gas is leaked from the buoyancy bag 5, it is regularly diluted with an inert gas and exhausted, and gas explosion can be prevented.

File 348:EUROPEAN PATENTS 1978-2004/Mar W01

File 349:PCT FULLTEXT 1979-2002/UB=20040304,UT=20040226

Set	Items	Description
S1	19375	BALLOON? ?
S2	1272	BLIMP OR BLIMPS OR DIRIGIBLE? ? OR AEROSTAT OR AEROSTATS OR AIRSHIP? ? OR ZEPPELIN? ? OR GASBAG? ? OR BALLONET? ?
S3	14335	LIGHTER()THAN()AIR OR INFLATABLE
S4	417628	ROD OR RODS OR FRAME OR FRAMES OR FRAMING OR FRAMEWORK? ? - OR SKELETON OR SKELETAL
S5	769597	STRUCTUR??
S6	495348	SLEEVE? ? OR ENVELOPE? ? OR POCKET? ? OR CHANNEL? ? OR JACKET? ? OR SHEATH?? OR CASING? ? OR ENCASEMENT? ?
S7	347341	STRIP OR STRIPS OR STRAP OR STRAPS OR BAND OR BANDS
S8	26	IC=A63H-003/06
S9	30079	S1:S3
S10	2825	S4:S5(5N)S6(S)S7
S11	175	S9 AND S10
S12	0	S8 AND S10
S13	52	S9(S)S10
S14	1	S13/TI,AB [not relevant]
S15	15	S13/CM
S16	15	S15 NOT S14
S17	259549	HELIUM OR HYDROGEN OR LIGHTER()THAN()AIR
S18	0	S16(S)S17
S19	6	S13 AND S17
S20	6	S19 NOT S14 [not relevant]
S21	1769	S1:S2(S)S17
S22	2893	S1(S)S17 OR S2
S23	2	S10(S)S22
S24	1	S23 NOT (S14 OR S19) [not relevant]
S25	276	S22/TI,AB
S26	10171	S4:S5(S)S6(S)S7
S27	1	S25 AND S26
S28	1	S27 NOT (S14 OR S19 OR S23)
S29	6	S22(S)S26 NOT (S14 OR S19 OR S23 OR S27)
S30	0	S8 AND S26
S31	531408	S4:S6(S)S6:S7
S32	113	((S8 OR S25) AND S31) NOT (S14 OR S19 OR S23 OR S27 OR S29)
S33	6	S8 AND S32
S34	27	S25(S)S31 NOT (S14 OR S19 OR S23 OR S27 OR S29 OR S33)

28/3,AB,K/1 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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00208799

AIRSHIP AND METHOD FOR CONTROLLING ITS FLIGHT
BALLON DIRIGEABLE ET PROCEDE DE CONTROLE DE VOL

Patent Applicant/Assignee:

COLTING Hakan,

Inventor(s):

COLTING Hakan,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9206002 A1 19920416

Application: WO 91CA348 19910926 (PCT/WO CA9100348)

Priority Application: US 90774 19900927

Designated States: AT AU BB BE BG BR CA CH CS DE DK ES FI FR GB GR HU IT JP

KP KR LU NL NO PL RO SE SU
Publication Language: English
Fulltext Word Count: 2650
English Abstract

A non-rigid **airship** is provided which includes a gas envelope having propulsion units mounted on either side thereof. Thrust emanating from the propulsion units is deflectable to control at least the vertical positioning of the **airship**. Horizontal positioning of the **airship** may be controlled by varying the relative thrust of the propulsion units. A method is also provided for controlling the flight path of an **airship**. The method includes providing propulsion units on opposite sides of the **airship** and deflecting the thrust of the propulsion units to control vertical placement of the **airship**. Horizontal placement of the **airship** may be carried out by varying the relative thrust of the propulsion units.
Fulltext Availability: Detailed Description

Detailed Description

... the gas envelope of the airship.

Attachment of the propulsion units 44 to the gas **envelope** may be accomplished with a combination of fabric, such as the type from which the gas **envelope**, is made and **straps**, wrapped around the **frame** 82 and secured to the gas **envelope**. The propulsion unit may be further supported and stabilized by wire cables such as cables...

29/3,AB,K/1 (Item 1 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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00577868

LIGHTWEIGHT DISPLAY SYSTEMS AND METHODS FOR MAKING AND EMPLOYING SAME
LEICHTGEWICHTANZEIGEGERAT UND VERFAHREN ZUR HERSTELLUNG UND GEBRAUCH
DESSELBEN.

SYSTEMES D'AFFICHAGE DE FAIBLE POIDS ET PROCEDES DE FABRICATION ET
D'UTILISATION

PATENT ASSIGNEE:

INWAVE CORPORATION, (935471), 750 Commercial Street, Eugene, OR 97402,
(US), (applicant designated states: BE;DE;ES;FR;GB;IT)

INVENTOR:

HARRIS, Lee, M., 230 East 33rd Avenue, Eugene, OR 97405, (US)

LEGAL REPRESENTATIVE:

Wise, Stephen James et al (46011), c/o RAWORTH, MOSS & COOK 36 Sydenham
Road, Croydon, Surrey CR0 2EF, (GB)

PATENT (CC, No, Kind, Date): EP 605414 A1 940713 (Basic)

EP 605414 A1 950628

EP 605414 B1 970409

WO 9306584 930401

APPLICATION (CC, No, Date): EP 91918082 910927; WO 91US7329 910927

PRIORITY (CC, No, Date): EP 91918082 910927; WO 91US7329 910927

DESIGNATED STATES: BE; DE; ES; FR; GB; IT

INTERNATIONAL PATENT CLASS: G09G-003/20; G02B-006/06; G09F-009/30;

NOTE: No A-document published by EPO

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPAB97	1327
CLAIMS B	(German)	EPAB97	1165
CLAIMS B	(French)	EPAB97	1431
SPEC B	(English)	EPAB97	7654

Total word count - document A 0
Total word count - document B 11577
Total word count - documents A + B 11577

...SPECIFICATION With reference to Fig. 4E, whenever display screen 12 is attached to an outer gas **envelope** surface 92 of a non-rigid type **airship** such as a **blimp**, a rigid **framework** is unnecessary. Display screen 12 can be adequately tensioned directly onto surface 92 of the **airship**. A series of 25.5 mm wide **straps** 94 made from nylon filament are attached at 1.3 m intervals across top 96...
...to it. Left and right edges 102 of substrate 16 are held in place on **airship** surface 92 by 50 mm loop hook and fastening tapes 95 such as velcro, extending...

33/6/1 (Item 1 from file: 349)
01005501 **Image available**
INTERNALLY LIGHTED INFLATABLE FIGURES

33/6/2 (Item 2 from file: 349)
00988461 **Image available**
TOY AIRPLANE ASSEMBLY HAVING A MICROPROCESOR FOR ASSISTING FLIGHT

33/6/3 (Item 3 from file: 349)
00841211 **Image available**
BALLOON INFLATION APPARATUS AND PLUG THEREFOR

33/6/5 (Item 5 from file: 349)
00147302
BALLOON STEM CONNECTOR

33/6/6 (Item 6 from file: 349)
00118064 **Image available**
NOISE MAKING BALLOON VALVE

33/3,AB,K/4 (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00241531
TOY, DOLL OR MANNEQUIN WITH DIMENSIONALLY VARIABLE EXTERIOR SURFACE
JOUET, POUPEE OU MANNEQUIN DOTE D'UNE SURFACE EXTERNE A DIMENSIONS
VARIABLES

Patent Applicant/Assignee:

GROSS Flora Geane,

Inventor(s):

GROSS Flora Geane,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9315803 A1 19930819

Application: WO 93US1086 19930208 (PCT/WO US9301086)

Priority Application: US 92704 19920207

Designated States: AU BR CA JP KR AT BE CH DE DK ES FR GB GR IE IT LU MC NL
PT SE

Publication Language: English

Fulltext Word Count: 19820

English Abstract

A doll is disclosed having an inner body or core (88d) with an outer surface (138) of a given contour, an outer skin (136) covering the exterior surface, and an expansible volume (134) or space between the

outer core surface and the outer skin, with the skin being expansible through a range of positions, including a first skin position closely overlying the outer surface of the core, a second skin position substantially spaced from the body exterior, and a plurality of positions intermediate these first and second positions, so as to simulate a change in body contours. The invention may also be practised by providing a separable bladder or suit (180) arrangement capable of use with existing figures to achieve to above and other objects.

Main International Patent Class: **A63H-003/06**

Fulltext Availability: Detailed Description

Detailed Description

... simulate change of contour due to I'musclebuilding",, and showing an expansible bladder, a confinement **sleeve** or girdle partially covering the bladder, and a life-like elastic exterior skin covering the bladder and **sleeve** or girdle, and showing how inflation simulates muscle growth;

Fig. 29 is a vertical sectional...openings and not only serve as manifold to permit passage of air into the various **pockets** or chambers 84, but also permit the marginal sections 86 to be inflated.

Figure 9...Fig. 11 shows the outer skin 90 as being in the form of a vest, **jacket** or like garment 96 with a single center seam for purposes of illustration. A commercial product may be made by utilizing a completely knitted or woven **sleeve** having no seam, if desired, As a preferred alternative, to enhance the appearance of the...at the neck at the margins 182f, 184f, 186f forming the openings respectively for the **sleeves**, the trouser or leg cuffs, and the neck cuffs area. Insofar as an opening or...In keeping with the invention, a bladder generally designated 314 and shown to be of **sleeve**-like construction is fitted over the upper arm 308. The bladder has inner and outer...

...26 shows that the bladder 314 having the seamed areas 316 to define individual air **pockets** is then covered with a girdle arrangement generally designated 318 and shown to include pre-selected areas 320, 322, 324 of minimal or no confinement, In addition, a **strap** 326, a thin section, is shown helping to define the adjacent open areas, 320, 322 not open are substantially non-expansible, Consequently, when the **sleeve** or cuff serving as the bladder 314 is inflated, those unconfined areas 320, 322, 324 permit sections of the inflatable bladder, **sleeve** or cuff to expand to simulate muscles such as shoulder biceps or triceps muscles. An...

...and confining cuff or girdle 318 with the skinlike, flesh-colored, expansible fabric or rubber **sleeve** material 330, Consequently, the expansion contraction mechanism is less visible and a realistic effect is...purpose, Fig. 52 illustrates how clothing, such as a snap-on bow tie 984, a **jacket** 986 and a watch and chain 988 may be used to dramatize weight gain. Fig...

...enlarged midsection 982 having dislodged the watch 988, and having popped open the vest or **jacket** 986 and the bow tie 984, Such apparent "weight gain" would signal to a user...

34/6/5 (Item 5 from file: 348)
00881325
Aircraft

34/6/8 (Item 3 from file: 349)
00980552 **Image available**

FLEXIBLE WALL MATERIAL FOR USE IN AN INFLATABLE STRUCTURE

34/6/9 (Item 4 from file: 349)

00910703 **Image available**
AERIAL IMAGE ILLUMINATION SYSTEM

34/6/10 (Item 5 from file: 349)
00839318 **Image available**
GUIDABLE AIRSHIP WITH A NOZZLE-SHAPED HOLLOW BODY

34/6/14 (Item 9 from file: 349)
00734362 **Image available**
LAUNCHING OF HIGH ALTITUDE AIRSHIPS

34/6/15 (Item 10 from file: 349)
00734361 **Image available**
SOLAR CELL ARRAY ORIENTATION IN AN AIRSHIP

34/6/18 (Item 13 from file: 349)
00437724 **Image available**
COMBINED AIRCRAFT

34/6/19 (Item 14 from file: 349)
00398158 **Image available**
DEVICE FOR TRANSFORMING AN AEROSTAT 'S ENVELOPE INTO A PARACHUTE

34/6/21 (Item 16 from file: 349)
00333428 **Image available**
AIR BALLOON CONTAINING INERT GAS

34/6/23 (Item 18 from file: 349)
00184575 **Image available**
**VERSATILE AIRCRAFT WITH WINGS COMPRISING INTEGRAL POWER UNITS AND HELIUM
SUPPLY FITTED WITH SELF-CONTAINED AND INTERCHANGEABLE NACELLES**

34/6/27 (Item 22 from file: 349)
00130960
STEERABLE AEROSTATIC BALLON

34/3,AB/2 (Item 2 from file: 348)
DIALOG(R) File 348:EUROPEAN PATENTS
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01434287
Envelope manufacturing method by the braider
Verfahren zur Herstellung von einer Hulle an einer Flechtmaschine
Procede pour la fabrication d'une enveloppe dans une machine a tresser
PATENT ASSIGNEE:
MURATA KIKAI KABUSHIKI KAISHA, (308934), 3, Minami-Ochiai-cho, Kisshoin,
Minami-ku, Kyoto-shi, Kyoto, (JP), (Applicant designated States: all)
INVENTOR:
Uchida, Hiroshi, 141-3, Horiage-cho, Omihachiman-shi, Shiga, (JP)
Uozumi, Tadashi, 16-15, Misasagi-Okanonishi-cho, Yamashina-ku, Kyoto, (JP)
Onda, Masahiko, 3-4-1-945-2, Azuma, Tsukuba-shi, Ibaragi, (JP)
LEGAL REPRESENTATIVE:
Gritschneider, Martin, Dipl.-Phys. et al (4511), Patentanwalte Abitz &
Partner Postfach 86 01 09, 81628 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 1215323 A1 020619 (Basic)
APPLICATION (CC, No, Date): EP 2001129304 011213;
PRIORITY (CC, No, Date): JP 2000378550 001213

DESIGNATED STATES: DE

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: D04C-001/06

ABSTRACT EP 1215323 A1

It is an object of the present invention to provide the **envelope** manufacturing method by the braider such that the **envelope** like the **airship** is formed as one object composed by the braider. The **envelope** manufacturing method by the braider, wherein a pair of the braiding material (1,2) whose braiding angle is (+-) (theta)(degree) to the axis and the axial material (3) whose angle is 0(degree) to the axis are organized as the braiding layer by the braider BR and the **envelope** En like the **airship** is composed as one body by said braiding layer and the thickness of the braiding layer in the axial both end parts of said **airship envelope** is arranged to be formed thinner than the thickness in the axial central part.

ABSTRACT WORD COUNT: 127

NOTE: Figure number on first page: 5

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200225	168
SPEC A	(English)	200225	2755
Total word count - document A			2923
Total word count - document B			0
Total word count - documents A + B			2923

34/3,AB/6 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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01078225

AIRSHIP AND METHOD OF OPERATION

AERONEF ET METHODE DE FONCTIONNEMENT DE CET AERONEF

Patent Applicant/Assignee:

21ST CENTURY AIRSHIPS INC, 1188B Gorham Street, Newmarket, Ontario L3Y 7V1, CA, CA (Residence), CA (Nationality), (For all designated states except: US)

Patent Applicant/Inventor:

COLTING Hokan, 1188B Gorham Street, Newmarket, Ontario L3Y 7V1, CA, CA (Residence), CA (Nationality), (Designated only for: US)

Legal Representative:

BOUSFIELD Kenneth (et al) (agent), Blake, Cassels & Graydon LLP, Box 25, Commerce Court West, Toronto, Ontario M5L 1A9, CA,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200400642 A1 20031231 (WO 0400642)

Application: WO 2003CA945 20030625 (PCT/WO CA2003000945)

Priority Application: CA 2391252 20020625

Parent Application/Grant:

Related by Continuation to: US 2002178345 20020625 (CON)

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU

CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP

KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL

PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE

SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 8763
English Abstract

An **airship** (20) has a generally spherical shape and has an internal **envelope** (24) for containing a lifting gas such as Helium or Hydrogen. The **airship** has a propulsion and control system (36, 38) that permits it to be flown to a desired loitering location, and to be maintained in that location for a period of time. In one embodiment the **airship** may achieve neutral buoyancy when the internal **envelope** is as little as 7 % full of lifting gas, and may have a service ceiling of about 60,000 ft. The **airship** has an equipment module (180) that can include either communications equipment, or monitoring equipment, or both. The **airship** can be remotely controlled from a ground station. The **airship** has a solar cell array and electric motors (44, 46) of the propulsion and control system are driven by power obtained from the array. The **airship** also has an auxiliary power unit (52) that can be used to drive the electric motors. The **airship** can have a pusher propeller that assists in driving the **airship** and also moves the point of flow separation of the spherical **airship** further aft. In one embodiment the **airship** can be refuelled at altitude to permit extended loitering.

34/3,AB/12 (Item 7 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00744422

VEHICLE
VEHICULE

Patent Applicant/Inventor:

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(Residence), RU (Nationality)

EGOROV Mikhail Andreevich, Shipilovskaya ul., 23-2-59, Moscow, 115563, RU
, RU (Residence), RU (Nationality)

Legal Representative:

EGOROV Mikhail Andreevich, Leninsky pr., 65/4-34, Moscow, 117296, RU

Patent and Priority Information (Country, Number, Date):

Patent: WO 200056568 A1 20000928 (WO 0056568)

Application: WO 2000RU28 20000201 (PCT/WO RU0000028)

Priority Application: RU 99103712 19990319

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU
LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA
UG US UZ VN YU ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: Russian

Filing Language: Russian

English Abstract

The present invention relates to a vehicle in the form of a volumetric body that comprises freight and passenger compartments, a plurality of electromotive plants and devices for accelerating the crew to a desired speed. This vehicle is intended for use on high-speed highways, while the aeronautic variant is in the shape of an airplane or an **airship** for

direct application. The main vehicle consists of an air-flow energy converter that comprises several **envelopes** separated by several **channels**. The energy converter may include several turbines and generators for supplying energy to the propulsion device of the vehicle. The operation ability of the energy converter is based on the use of rarefaction at its bottom section and of the energy of the circulating flow that enters the inlet **channels** thereof. This process also uses a strong increase in the flow rate onto the turbine which is due to the corresponding decrease in its enthalpy, i.e. the thermal component of its global energy. As for support members, propulsion devices, guides and other equipment, the invention involves using the technical solutions applied in high-speed railways, **airships**, airplanes, etc.

34/3,AB/13 (Item 8 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00743442

VEHICLE

VEHICULE

Patent Applicant/Inventor:

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EGOROV Mikhail Andreevich, ul. Shipilovskaya, 23-2-59, Moscow, 115563, RU
, RU (Residence), RU (Nationality)

Legal Representative:

EGOROV Mikhail Andreevich, Leninsky prospekt, 65/4-34, Moscow, 117296, RU

Patent and Priority Information (Country, Number, Date):

Patent: WO 200056567 A1 20000928 (WO 0056567)

Application: WO 2000RU106 20000320 (PCT/WO RU0000106)

Priority Application: RU 99103712 19990319

Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES

FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU

LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA

UG US UZ VN YU ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: Russian

Filing Language: Russian

English Abstract

The present invention relates to a vehicle in the form of a volumetric body that comprises freight and passenger compartments, a plurality of electromotive plants and devices for accelerating the crew to a desired speed. This vehicle is intended for use on high-speed highways, while the aeronautic variant is in the shape of an airplane or an **airship** for direct application. The main vehicle consists of an air-flow energy converter that comprises several **envelopes** separated by several **channels**. The energy converter may include several turbines and generators for supplying energy to the propulsion device of the vehicle. The operation ability of the energy converter is based on the use of rarefaction at its bottom section and of the energy of the circulating flow that enters the inlet **channels** thereof. This process also uses a strong increase in the flow rate onto the turbine which is due to the corresponding decrease in its enthalpy, i.e. the thermal component of its global energy. As for support members, propulsion devices, guides and

other equipment, the invention involves using the technical solutions applied in high-speed railways, **airships**, airplanes, etc.

34/3,AB/16 (Item 11 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00537013

**OPENING REINFORCEMENT FOR AEROSTAT ENVELOPE
RENFORT D'OUVERTURE POUR ENVELOPPE D'AEROSTAT**

Patent Applicant/Assignee:

CENTRE NATIONAL D'ETUDES SPATIALES,
CASTERAS Christophe Rene Jacques Marie,

Inventor(s):

CASTERAS Christophe Rene Jacques Marie,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200000386 A1 20000106 (WO 0000386)

Application: WO 99FR1521 19990624 (PCT/WO FR9901521)

Priority Application: FR 988154 19980626

Designated States: US AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

Publication Language: French

Fulltext Word Count: 3604

English Abstract

The invention concerns a device for reinforcing the opening (5) of a flexible **envelope** designed to be stretched, in particular an **aerostat envelope** (1). The invention is characterised in that it comprises first (12) and second (13) adjacent ring-shaped members. The shroud (1) is designed to pass successively over the internal parts of said first (12) and second (13) ring-shaped members surfaces, over said second (13) ring-shaped member external surface part, then again over said first ring-shaped member (12) internal surface part, between itself and said portion.

34/3,AB/20 (Item 15 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00359874

**A LIGHTER-THAN-AIR LIFTING BODY
ENGIN TRANSPORTEUR PLUS LEGER QUE L'AIR**

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Patent and Priority Information (Country, Number, Date):

Patent: WO 9700199 A1 19970103

Application: WO 96CN39 19960610 (PCT/WO CN9600039)

Priority Application: CN 95215019 19950615

Designated States: BR CN DE JP RU US

Publication Language: Chinese

English Abstract

The invention relates to a **lighter - than - air** lifting body consisting of an outer **envelope**, an air vent that disposed therein and a closure for closing the air vent. The air vent is closed upon air contained in the **envelope** drawn out, to make the inside of the **envelope** be vacuum. The invention has advantages of cost being lower than a **helium**-filled **balloon**, and manufacture being easier and uses being safer compared with a **hydrogen**-filled **balloon**.

34/3,AB/22 (Item 17 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00322596

BALLOON/AIRSHIP
BALLON/DIRIGEABLE

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Patent and Priority Information (Country, Number, Date):

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Application: WO 94GB1776 19940812 (PCT/WO GB9401776)

Priority Application: WO 94GB1776 19940812

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ES FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Publication Language: English

Fulltext Word Count: 1350

English Abstract

A balloon/ **airship** embodying a double **envelope** consisting of the inner **envelope** (2) enclosed by the outer **envelope** (1) both the **envelopes** forming an integrally functioning double **envelope** , containing an enclosed gas/air space or passages (6) into which gas/air is pumped under a small pressure wich in turn acts on the outer **envelope** (1) which expands and displaces the surrounding air and simultaneously is prevented from entering the created vacuum in the space (7) inside the inner **envelope** (2) which expands together as one body with the outer **envelope**(1).

34/3,AB/24 (Item 19 from file: 349)
DIALOG(R) File 349:PCT FULLTEXT
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00164483

IMPROVED AIRSHIP
AERONEF AMELIORE

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Patent and Priority Information (Country, Number, Date):

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Priority Application: AU 888252 19880513

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GB GB HU IT JP KP KR LK LU LU MC MG ML MR MW NL NL NO RO SD SE SE SN SU
TD TG US

Publication Language: English

Fulltext Word Count: 3416

English Abstract

An **airship** comprises two substantially parallel, spaced apart and semirigid hulls (1, 2) adapted to contain a lifting gas, a gondola (3) is connected to the hulls (1, 2), and a drive means is provided to impart vertical lift to the **airship** . A drive means adapted to impart

horizontal motion to the **airship** may also be provided. Each hull (1, 2) includes a **framework** comprising two semirigid circumferential **bands** which are interconnected by a plurality of longitudinal **strips** and a plurality of radially extending spokes. Support means (22, 23, 24) interconnect the circumferential **bands** of each hull (1, 2) to the gondola (3). Each hull (1, 2) consists of an outer covering enclosing a number of gas containing cells. The hulls (1, 2) are longer than their width and wider than their height and in cross-sections they have a shape approximate to that of an aerofoil. Ventrally as compared to dorsally the hulls (1, 2) are substantially flatter. Vertical fins (8), tail planes (6), forward stabilizers (7) are provided to assist in the overall manoeuvrability and stability of the **airship**.

34/3,AB/25 (Item 20 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00158893

AEROSTAT WHICH TRAVELS AUTONOMOUSLY AND REVERSIBLY BETWEEN THE GROUND OF A PLANET WITH AN ATMOSPHERE AND A PREDETERMINED CEILING ALTITUDE
AEROSTAT DESTINE A EVOLUER DE FACON AUTONOME ET REVERSIBLE ENTRE LE SOL D'UNE PLANETE A ATMOSPHERE ET UNE ALTITUDE PLAFOND PREDETERMINEE

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Patent and Priority Information (Country, Number, Date):

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Publication Language: French

Fulltext Word Count: 4088

English Abstract

A double-balloon **aerostat** travels autonomously and reversibly between the ground of a planet with an atmosphere and a predetermined ceiling altitude. Said **aerostat** comprises a first closed balloon (1) called a carrier, which contains a gas lighter than the gas present in the atmosphere, and a solar hot-air balloon (3) comprising a permanent opening (6) through which it can be filled by the gas present in the atmosphere. The hot air balloon (3) has an upper open end delimited by an annular rim, and gas-tight fastening means are adapted for securing the annular edge to the peripheral wall of the carrier balloon (1) in such a way that the latter extends partially into the interior of the **envelope** of the hot-air balloon (3).